SOUTHERN GROUP OF STATE FORESTERS
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June 14, 2021

Department for Business, Energy, and Industrial Strategy
UNITED KINGDOM
biomass.strategy@beis.gov.uk

Re: Call for Evidence on the Role of Biomass in Achieving Net Zero

To Whom It May Concern,

The Southern Group of State Foresters (SGSF) is pleased to offer these comments on the current United Kingdom Department for Business, Energy and Industrial Strategy (BEIS) Call for Evidence on the Role of Biomass in Achieving Net Zero. SGSF represents the interests of the state government forestry agencies from a 13-state area of the southern United States. A majority (roughly 60%)[1] of the wood pellets currently supplied to the European Union (EU) to help meet its renewable energy and climate goals come from our region, and we are the dominant supplier to the UK as well. Our members, the State Foresters, are responsible for managing state forests and supporting landowners with privately-owned forests as they simultaneously supply wood products and provide ecosystem services that benefit our country and the world. The SGSF mission is to provide leadership in sustaining the economic, environmental, and social benefits of the South's forests.

As our area of expertise is forestry norms in the United States, we have kept our responses within the Call for Evidence narrowly focused on the topics of biomass availability and biomass sourcing sustainability within our region. We appreciate the interest BEIS has shown in using SGSF as a subject-matter expert resource in the past, and we enjoyed hosting a BEIS delegation visit to our region in September of 2019. We hope that visit and numerous follow-up conversations were helpful, and serve as a useful lens in through which to view the information presented in these comments.

Chapter 1 – Question 7: What is the potential biomass resource from imports compared to the levels we currently receive? What are the current and potential risks, opportunities and barriers (e.g., sustainability, economic, etc) to increasing the volumes of imported biomass?

As stated in the introduction, the production of wood pellets for export from the US occurs primarily within our 13-state region. The area extends from Virginia southward and westward along the Atlantic and Gulf seaboards to Texas and includes the interior states of Arkansas,

[1] http://biomassmagazine.com/articles/16371/report-eu-demand-for-wood-pellets-continues-to-grow

Kentucky, Oklahoma, and Tennessee. In the South, total forest land is 245 million acres (99 million hectares), which is equivalent to 46 % of the South's land area[2]. The forest landscape in the southern United States is markedly different from that found in Europe. The crux of this difference lies in the fact that the majority (86%) of forest land in the South is under private ownership, with 66% of that owned by non-industrial private forest (NIPF) owners[3]. This means that any conversation on forest policy and environmental or sustainability outcomes must inherently center on discussion of how those NIPF owners currently manage their land, and how incentives and markets might change that management into the future. Research indicates that the vast majority (over 70%) of NIPF owners own land for reasons of nature protection and aesthetics[4]. This indicates a strong desire to be good stewards of the land and for their forests to be well-managed, making it in their best interest to make informed decisions about their land and their trees before any active management.

The United States has the most robust forest monitoring system in the world, which is the Forest Inventory and Analysis (FIA) program[5]. In operation since 1930, the FIA program collects, analyzes, and reports information on the status and trends of America's forests: how much forest exists, where it exists, who owns it, and how it is changing, as well as how the trees and other forest vegetation are growing and how much has died or has been removed in recent years. This information can be used in many ways, such as in evaluating wildlife habitat conditions, assessing the sustainability of ecosystem management practices, and supporting planning and decision-making activities undertaken by public and private enterprises. In the South, the FIA program is jointly delivered by the USDA Forest Service (federal) and the State forestry agencies that make up SGSF.

Currently, FIA data show that significantly more trees are growing in southern forests than are being harvested[6,7]. Across the area where pellet mills have opened, forests are growing 60 percent more volume than is being removed through all causes including harvest, insects & disease, and wildfire. The same trends remain when examined at smaller scales, with individual states showing between 40 and 100 percent more growth than removal. We have included as an attachment to these comments the most recent FIA reports for each state, which document growth, removals and mortality of forests in the state for your reference. Simply put, there is an abundance of trees on the landscape to support growth in all wood products markets, including wood pellets. Some of this abundance can be attributed to the loss of paper production capacity in our region. There has been a decline in the pulp and paper market as a result of the 2008 recession and waning global demand for printed materials. The wood pellet mills are helping to fill that market void, even siting in some of the exact same woodbaskets that have lost paper mills.

We see further growth in wood pellet markets as an opportunity, as opposed to risk. In our region, the growth of the wood pellet industry to supply decarbonization efforts across the globe,

[2] https://doi.org/10.2737/SRS-GTR-258
[3] http://www.srs.fs.fed.us/pubs/gtr/gtr_srs178.pdf
[4] https://www.nrs.fs.fed.us/pubs/62180
[5] https://www.fia.fs.fed.us/
[6] https://www.forest2market.com/hubfs/2016_Website/Documents/20151119_Forest2Market_USSouthWoodSupplyTrends.pdf
[7] https://public.tableau.com/views/FIA_OneClick_V1_2/StateSelection?:showVizHome=no

including those of the United Kingdom, has had the co-benefit of improving the health of our forests. Markets for forest products in general have been shown to have positive impacts on forest cover and forest management in the US South. The largest positive impact comes from the market incentive provided to private landowners to keep their forests as forests and not convert them to other potentially more profitable land uses such as agriculture and development. The positive impact of strong forest products markets on forest retention has been shown historically, as the acreage of forests in the US South has grown in the past 50 years despite a significant increase in wood harvested for a variety of products[8]. This trend has also been modelled into the future with studies showing beneficial forest cover and carbon impacts from wood pellet market growth[9,10,11]. Simply put, markets for their wood encourage landowners to plant more trees. While it may seem counterintuitive to those that do not live in this part of the world, harvesting trees leads to more forests on the landscape in the long-run. Private landowners invested decades ago in tree seedlings that are now fully grown and need to be harvested for both economic and ecological reasons, so those landowners can replant and begin the cycle of sustainable forestry anew. Growth in wood pellet and other markets incentivizes perpetuation of that cycle.

Chapter 3 - Question 15: Are our existing sustainability criteria sufficient in ensuring that biomass can deliver the GHG emission savings needed to meet net zero without wider adverse impacts including on land use and biodiversity? How could they be amended to ensure biomass from all sources supports wider climate, environmental and societal goals?

In short, we do not think the biomass sustainability criteria need to be modified and we believe they are sufficient to avoid land use or biodiversity impacts. It is our experience that the current processes wood pellet manufacturers in our region have to follow to export to the UK are adequate to ensure sustainability. For many mills, sustainability is shown through a risk-based assessment at the supply-base level (as opposed to requiring landowner certification), which has been shown to be reliable and effective in our region where the majority of forest landowners will likely never participate in forest certification due to costs and lack of return-on-investment. These risk-based analyses heavily rely on the numerous sources of sustainability data already being generated in our region, including by our state agencies. This includes FIA data as described in the answer to question #7, as well as data on implementation of state forestry best management practices (BMPs).

BMPs exist in every southern state to minimize impacts to water quality and other resources from silvicultural activities. Categories of activities for which BMPs exist in most states include harvesting, site preparation, forest roads, stream crossings, and streamside management zones. State forestry agencies developed BMPs starting in the 1970s, and they have been actively evaluated, tested, revised, and adapted over time. The federal Clean Water Act recognizes BMPs as the most viable pathway to address nonpoint source pollution that originates from various land management activities. Each state implements BMP programs according to its unique landowner characteristics, ecological conditions, forest industries, and socio-political norms, and conducts BMP effectiveness monitoring to track environmental outcomes. The approaches range from

[8] https://www.fs.usda.gov/treesearch/pubs/59976
[9] https://onlinelibrary.wiley.com/doi/epdf/10.1111/gcbb.12273
[10] https://onlinelibrary.wiley.com/doi/full/10.1111/gcbb.12445
[11] https://www.srs.fs.usda.gov/pubs/47281

regulatory (forest practices law or silvicultural BMP legislation) to non-regulatory (voluntary adoption and promotion of the use of BMPs through training and education); however, research has shown that all program structures are equally successful at achieving environmental outcomes.

SGSF and its members track BMP implementation rates on a state-by-state basis, as well as rolled up at the regional level. The most recent synthesis report in 2019 indicates that BMP implementation across the South is very high at 93.6%, and that implementation has been steadily increasing over the past two decades[12]. In particular, logger training programs have proven to be a key element in strengthening the acceptance, adoption, and use of forestry BMPs. The ongoing process of BMP monitoring is something that SGSF and its partners are committed to in showing implementation of sustainable harvest practices, and will continue to use to track environmental outcomes into the future.

It is important to keep in mind that sourcing fiber for wood pellets represents only a small fraction of the ongoing forestry activity in the South. It is a common misconception that a forest tract is "harvested for pellets"[13]. The reality is that when a landowner harvests their timber, up to a dozen different products can be sold at the same time including high-value saw timber and veneer logs, as well as lower value pulpwood and fiber for wood pellets. This has been the case in our region for decades, since long before the advent of industrial wood pellet production for export. It is for this reason that our region has a long history of monitoring sustainability at the landscape level, as opposed to at the product level (ie – for wood pellets only).

The latest regional sustainability analysis is the Southern Forest Futures Report (SFF)[14]. SFF, as well as associated subregional outlooks, examine potential futures of southern forests in response to a variety of factors, both natural and anthropogenic. This report represents the most comprehensive analysis of how southern forests could change on the macro-level. Using computer modeling and cutting-edge scientific analysis, the report presents a range of plausible futures or scenarios for the South's forests based on a variety of influences such as urbanization, bioenergy, climate change, land ownership changes, and invasive species. It does not attempt to predict the singular path forward, but instead delivers a range of possible outcomes to inform policy and land management decisions.

Regarding forest biomass-based energy, the report finds that "*While woody biomass harvest is expected to increase with higher prices, forest inventories would not necessarily decline because of increased plantations of fast growing species, afforestation of agricultural or pasturelands, and intensive management of forest lands*" (Technical Report, pg. 213). While the report recognizes the potential for high demand for woody biomass energy to affect harvest levels and create impacts to ecosystem services such as water and wildlife, research findings indicate that these effects can be mitigated at the local level through management considerations and use of BMPs (Technical Report, pg. 250). An update to SFF is due out within the next year, which will give updated insight into landscape-level forest sustainability in our region.

[12] https://www.southernforests.org/resources/publications/SGSF%20Water%20BMP%20Report%20FINAL.pdf
[13] https://www.forest2market.com/blog/inaccurate-portrayals-of-forestry-wood-biomass-persist
[14] https://www.srs.fs.usda.gov/futures/

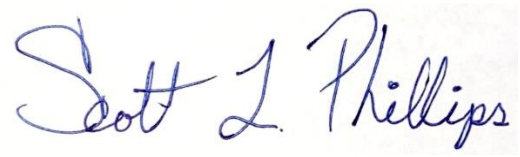
Finally, it is worth noting the inherent sustainability determinations that come with siting wood products facilities, including those for wood pellets. It is common practice for those making large capital investments in facilities to make sure they are sited in woodbaskets that have ample fiber supply. Utilization foresters at our state agencies often play an integral role in helping wood products companies access and understand FIA data, including growth-to-drain rations, so they can site their mill in a location that will be sustainable both economically and environmentally. These utilization foresters are aware of all the potential harvest demands on a woodbasket into the future as well as the areas that are in need of additional mill investment to support improving forest health.

In summation, we feel that the combination of the current UK biomass sustainability criteria and the ongoing sustainability monitoring we do in our region is more than adequate to ensure that biomass can deliver the GHG emission savings needed by the UK to meet net zero without wider adverse impacts including on land use and biodiversity.

Conclusion

Once again, thank you for the opportunity to respond to this Call for Evidence, and your ongoing interest in using SGSF as subject-matter expert resource in southern US forestry. If you should require any additional information on forestry norms in the US, please do not hesitate to reach out to us at any time.

Sincerely,



Scott Phillips
State Forester, South Carolina
Chair, Southern Group of State Foresters

USDA United States Department of Agriculture

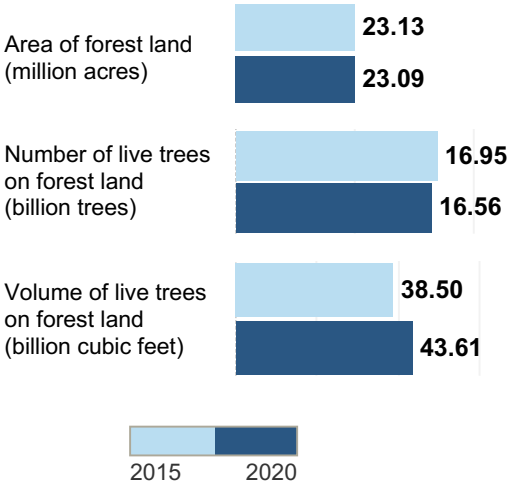
Forests of Alabama, 2020

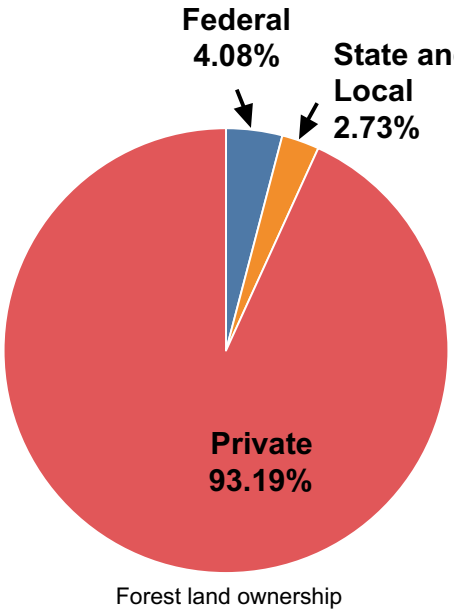
Alabama has an estimated **23,093,930** acres of forest land.

* Percent forest is forest area/total area. Percent forest with water removed from total area is 72%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Alabama. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Alabama has 5,606 sample plots across the State, of which 4,276 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.





71,915 acres of nonforest revert back to forest annually*

72,123 acres of forest land convert annually* to nonforest

740,555 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

408,114 acres of forest land are disturbed annually* by fire

48,761 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

The estimates presented are based on data retrieved from the FIA database (06/01/2021) and may not reflect the most recent data available from the FIA program. Note – this publication does not include estimates of uncertainty. The most current data and sampling error for the estimates above can be found by visiting https://www.fia.fs.fed.us/.

*Average annual estimates are based on data collected across 5-10 years and may not be indicative of the nominal year presented in the title by itself.

USDA United States Department of Agriculture

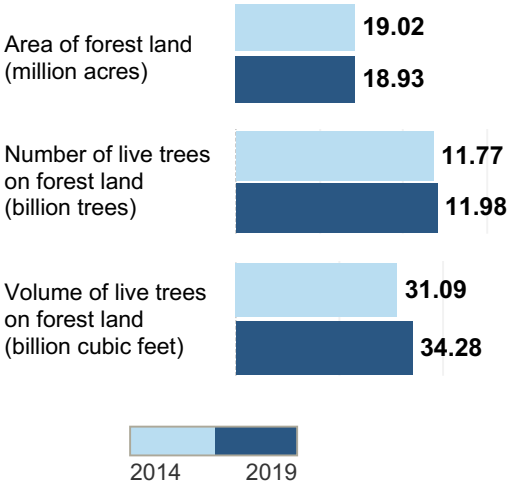
Forests of Arkansas, 2019

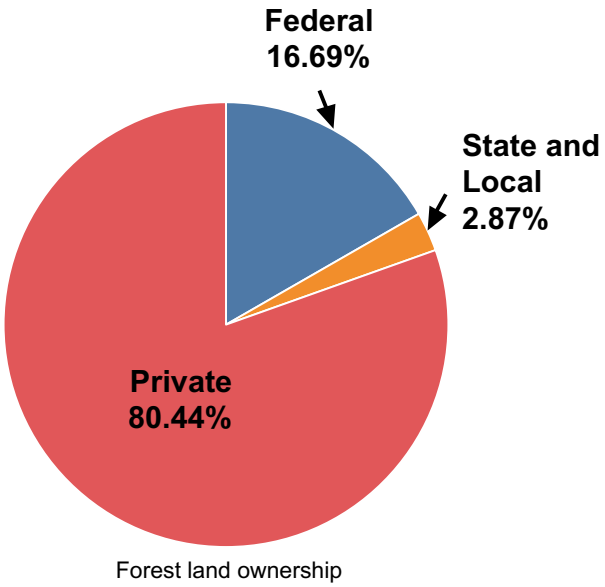
Arkansas has an estimated **18,926,298** acres of forest land.

* Percent forest is forest area/total area. Percent forest with water removed from total area is 57%.

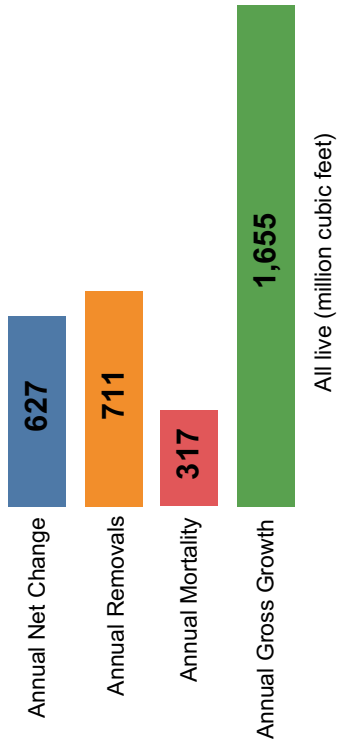
This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Arkansas. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Arkansas has 5,669 sample plots across the State, of which 3,559 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.





Forest land ownership



52,298 acres of nonforest revert back to forest annually*

70,992 acres of forest land convert annually* to nonforest

412,261 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

83,558 acres of forest land are disturbed annually* by fire

61,709 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

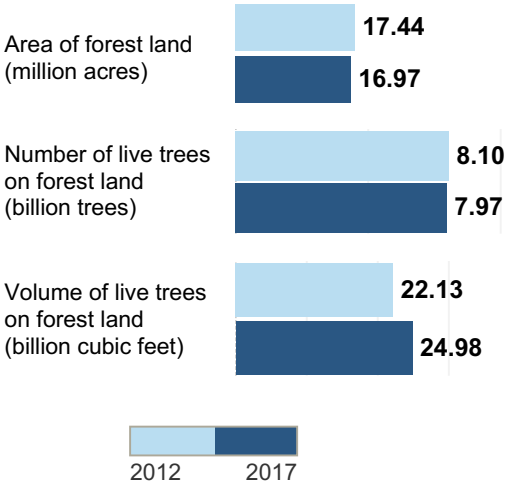
Forests of Florida, 2017

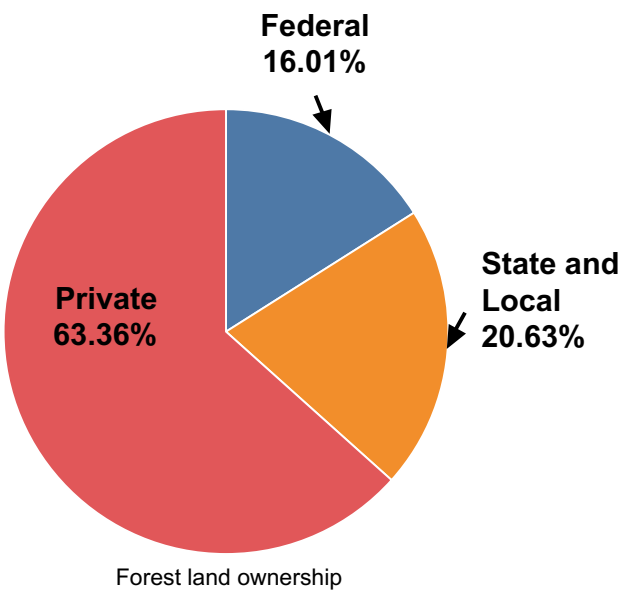
Florida has an estimated **16,970,464** acres of forest land.

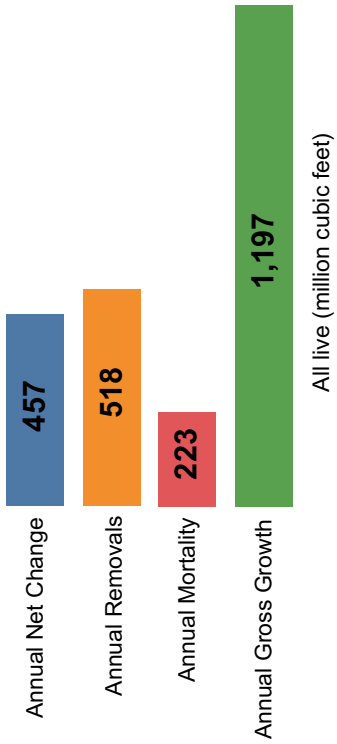
* Percent forest is forest area/total area. Percent forest with water removed from total area is 49%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Florida. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Florida has 7,015 sample plots across the State, of which 3,245 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







33,151 acres of nonforest revert back to forest annually*

129,797 acres of forest land convert annually* to nonforest

363,156 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

438,096 acres of forest land are disturbed annually* by fire

93,935 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA

United States Department of Agriculture

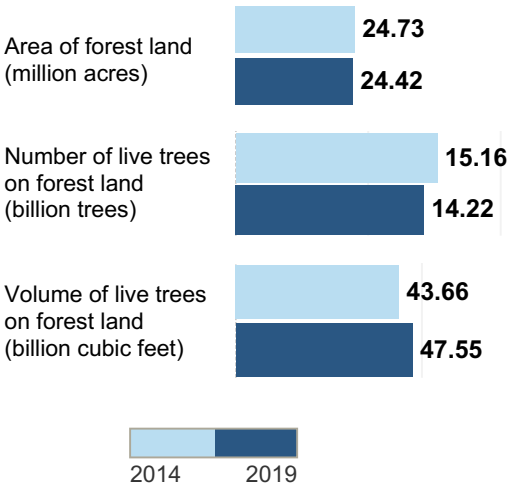
Forests of Georgia, 2019

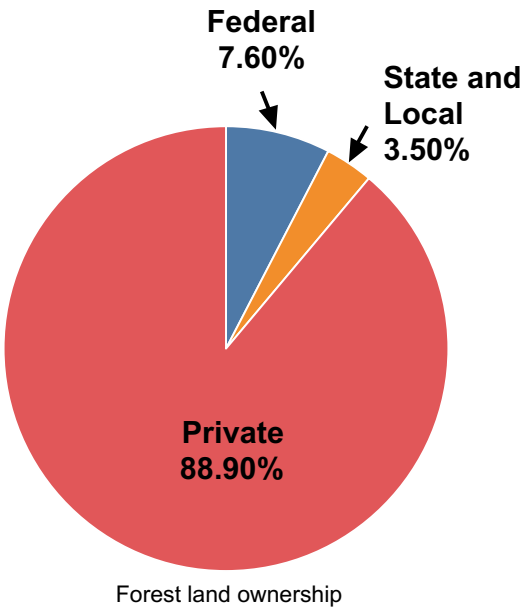
Georgia has an estimated **24,418,248** acres of forest land.

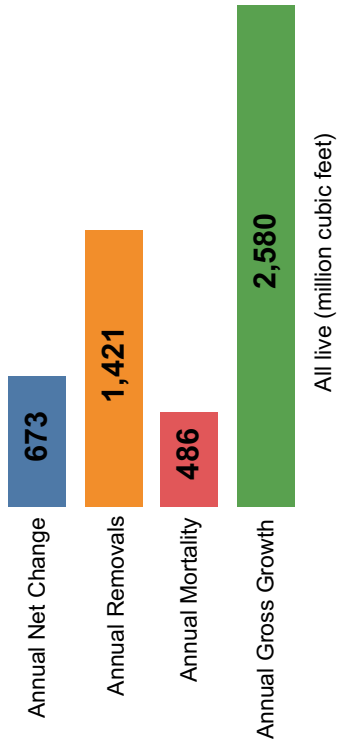
* Percent forest is forest area/total area. Percent forest with water removed from total area is 66%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Georgia. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Georgia has 6,598 sample plots across the State, of which 4,887 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







61,103 acres of nonforest revert back to forest annually*

117,784 acres of forest land convert annually* to nonforest

807,882 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

509,752 acres of forest land are disturbed annually* by fire

94,303 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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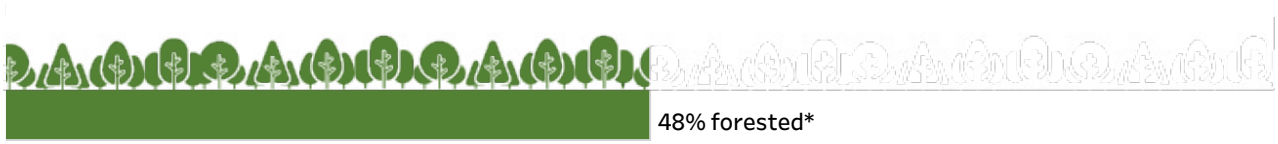
USDA United States Department of Agriculture

Forests of Kentucky, 2017

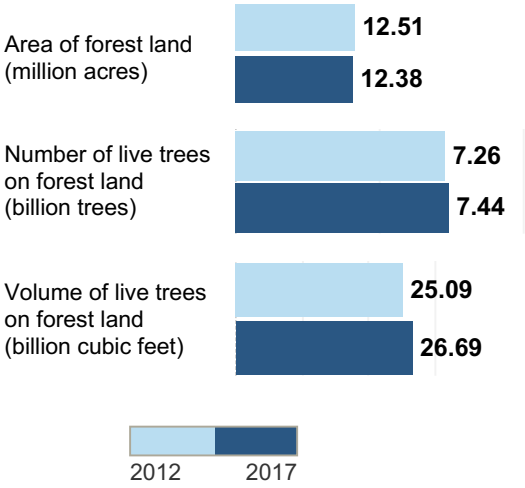


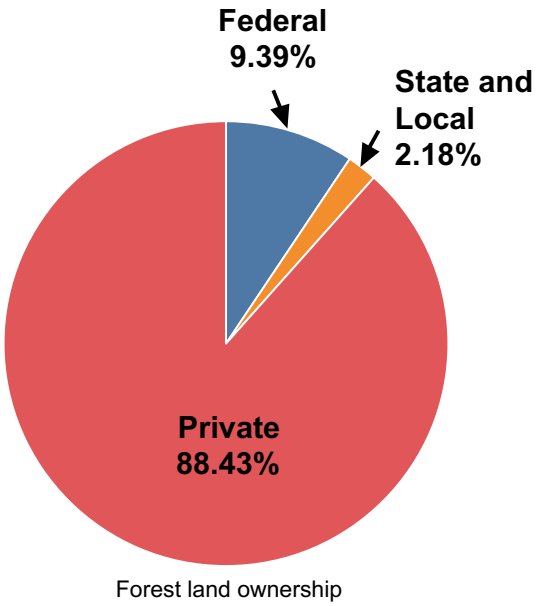
Kentucky has an estimated **12,375,942** acres of forest land.

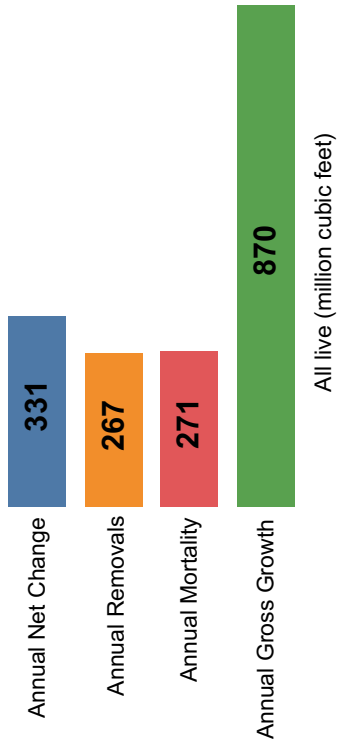
* Percent forest is forest area/total area. Percent forest with water removed from total area is 49%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Kentucky. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Kentucky has 4,291 sample plots across the State, of which 2,439 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







54,466 acres of nonforest revert back to forest annually*

79,332 acres of forest land convert annually* to nonforest

159,704 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

24,595 acres of forest land are disturbed annually* by fire

121,268 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

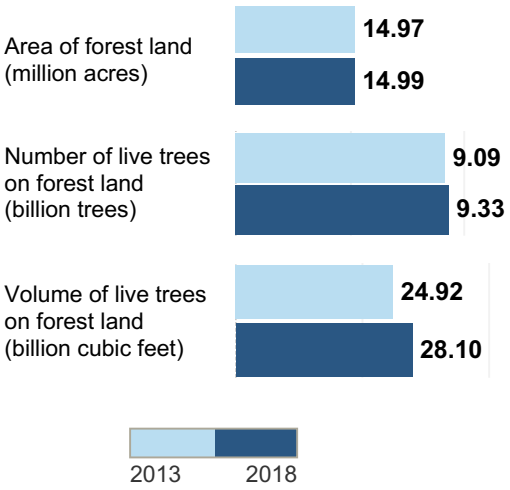
Forests of Louisiana, 2018

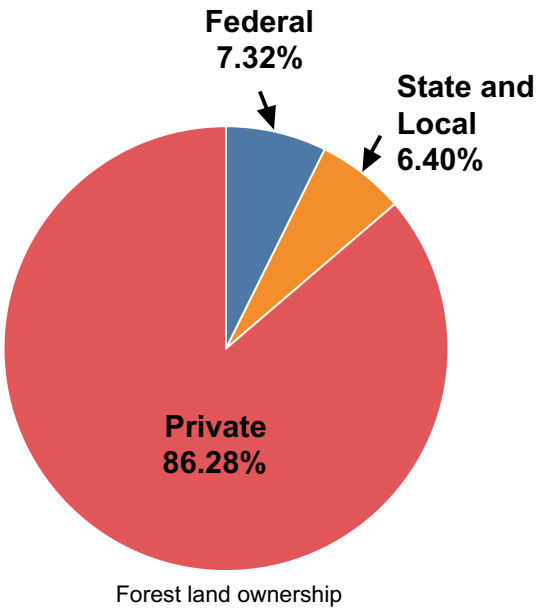
Louisiana has an estimated **14,994,021** acres of forest land.

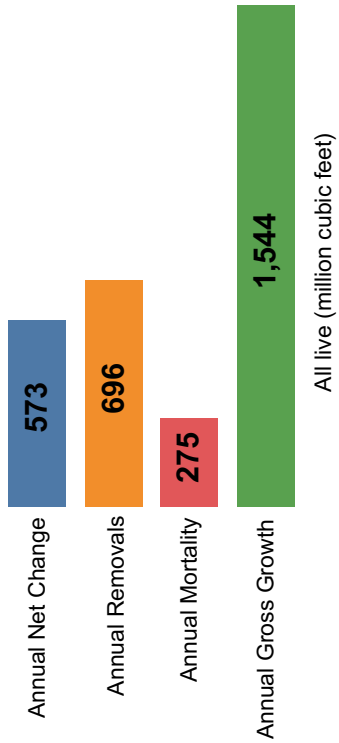
* Percent forest is forest area/total area. Percent forest with water removed from total area is 56%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Louisiana. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Louisiana has 5,392 sample plots across the State, of which 2,625 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







80,337 acres of nonforest revert back to forest annually*

48,191 acres of forest land convert annually* to nonforest

447,866 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

103,894 acres of forest land are disturbed annually* by fire

171,103 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

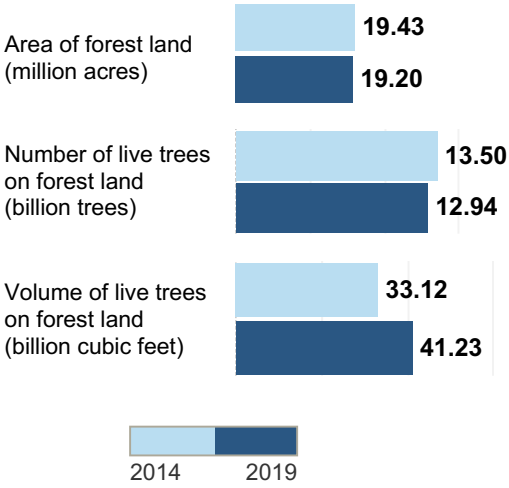
Forests of Mississippi, 2019

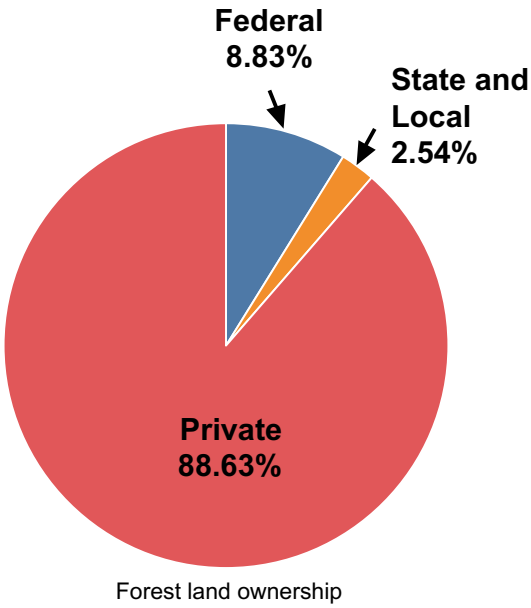
Mississippi has an estimated **19,204,328** acres of forest land.

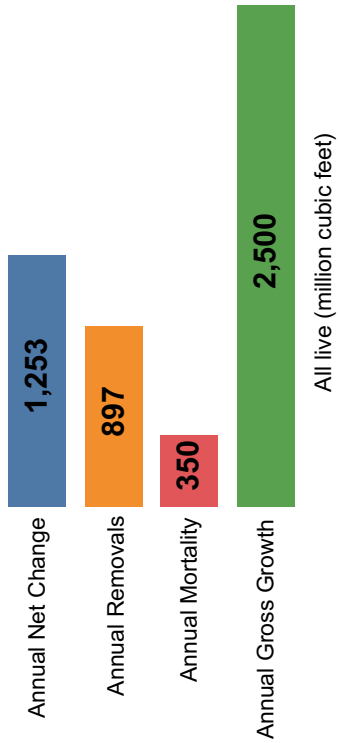
* Percent forest is forest area/total area. Percent forest with water removed from total area is 65%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Mississippi. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Mississippi has 5,540 sample plots across the State, of which 3,996 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







50,308 acres of nonforest revert back to forest annually*

76,869 acres of forest land convert annually* to nonforest

511,696 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

198,432 acres of forest land are disturbed annually* by fire

35,313 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

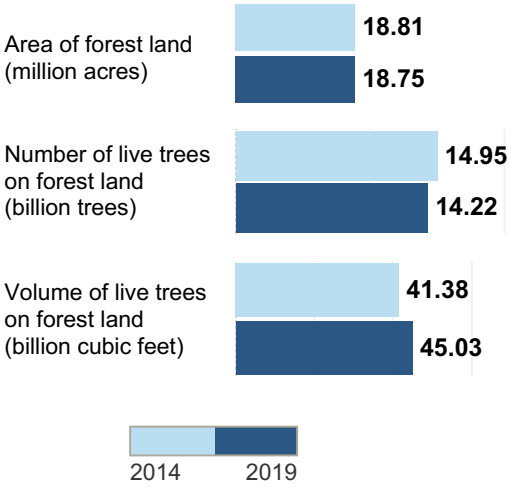
Forests of North Carolina, 2019

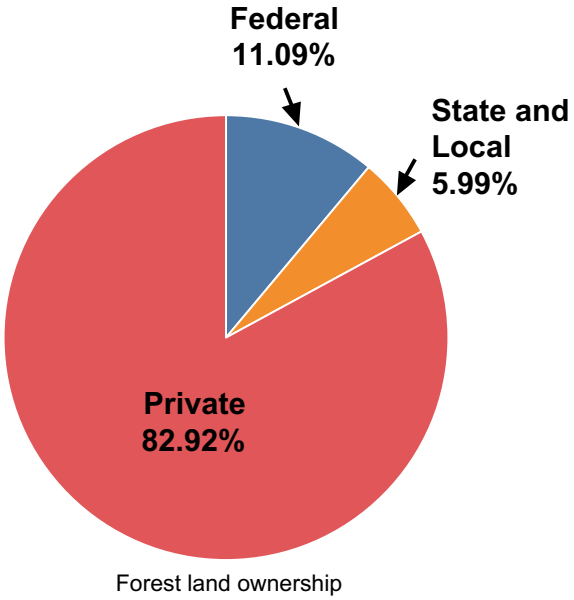
North Carolina has an estimated **18,750,216** acres of forest land.

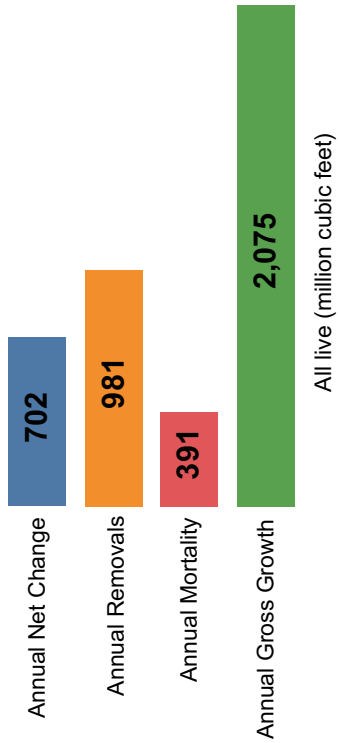
* Percent forest is forest area/total area. Percent forest with water removed from total area is 61%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in North Carolina. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

North Carolina has 5,726 sample plots across the State, of which 3,648 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







57,534 acres of nonforest revert back to forest annually*

62,573 acres of forest land convert annually* to nonforest

399,490 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

111,431 acres of forest land are disturbed annually* by fire

78,581 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

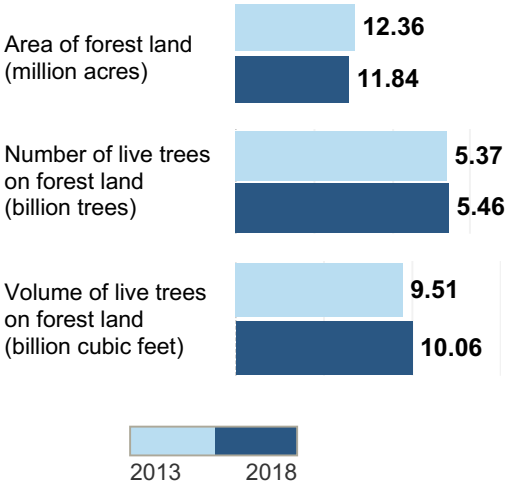
Forests of Oklahoma, 2018

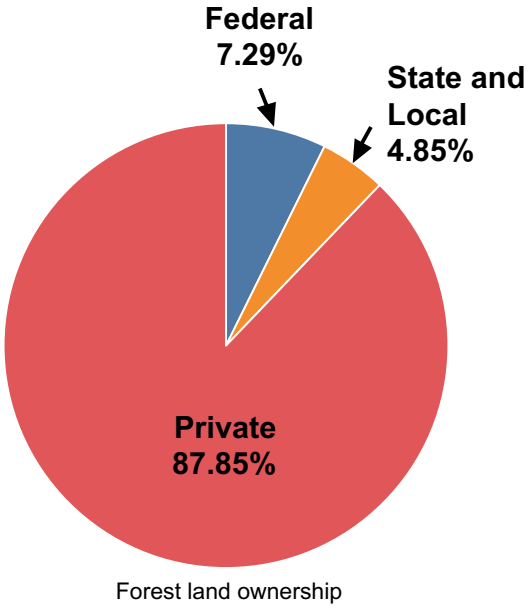
Oklahoma has an estimated **11,839,461** acres of forest land.

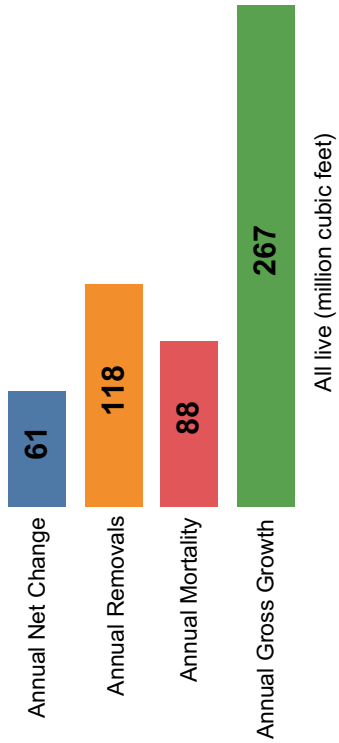
* Percent forest is forest area/total area. Percent forest with water removed from total area is 27%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Oklahoma. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Oklahoma has 7,272 sample plots across the State, of which 2,354 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







15,204 acres of nonforest revert back to forest annually*

52,546 acres of forest land convert annually* to nonforest

71,934 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

129,966 acres of forest land are disturbed annually* by fire

45,887 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

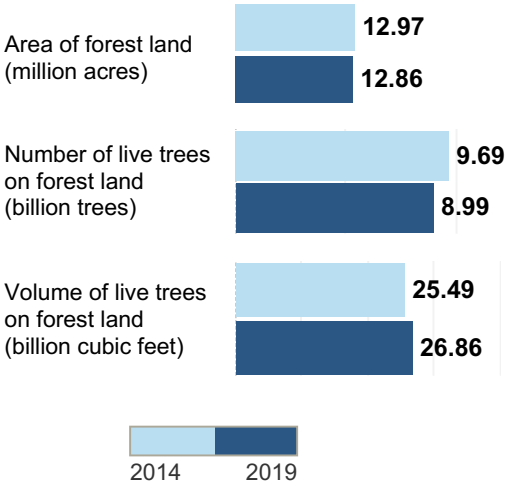
Forests of South Carolina, 2019

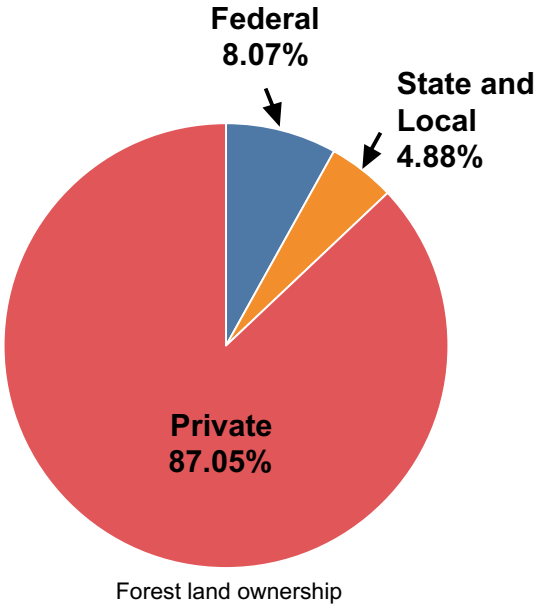
South Carolina has an estimated **12,855,676** acres of forest land.

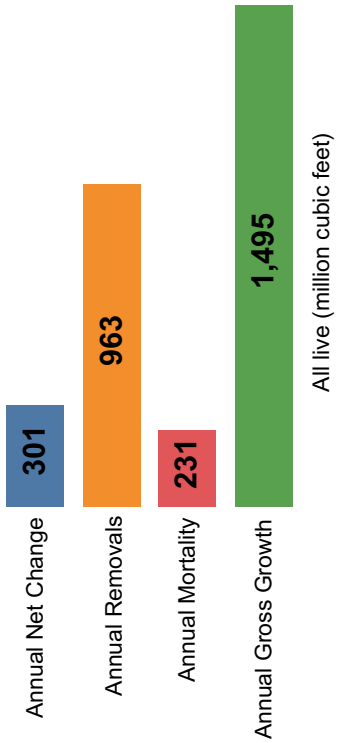
* Percent forest is forest area/total area. Percent forest with water removed from total area is 67%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in South Carolina. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

South Carolina has 3,640 sample plots across the State, of which 2,685 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







38,735 acres of nonforest revert back to forest annually*

51,425 acres of forest land convert annually* to nonforest

507,696 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

166,586 acres of forest land are disturbed annually* by fire

94,878 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

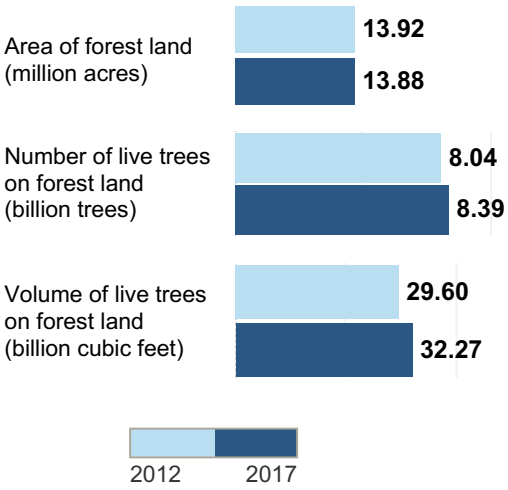
Forests of Tennessee, 2017

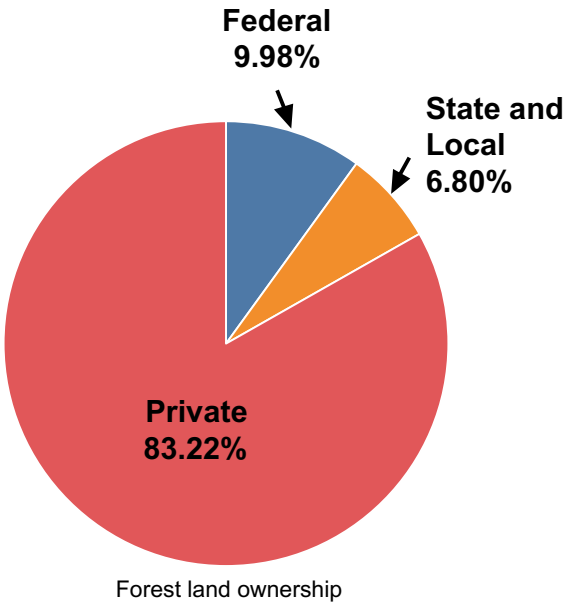
Tennessee has an estimated **13,881,539** acres of forest land.

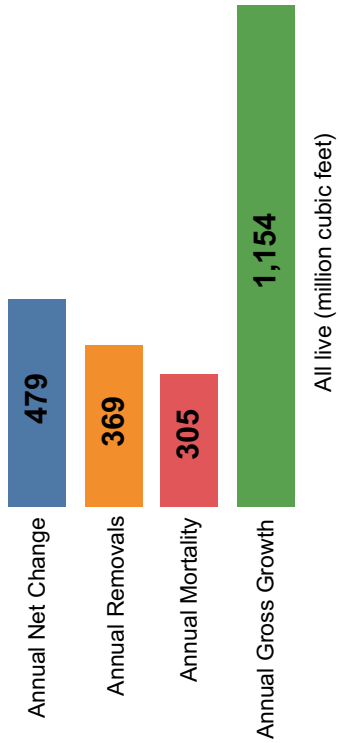
* Percent forest is forest area/total area. Percent forest with water removed from total area is 53%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Tennessee. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Tennessee has 4,694 sample plots across the State, of which 2,932 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







57,547 acres of nonforest revert back to forest annually*

57,225 acres of forest land convert annually* to nonforest

196,546 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

26,394 acres of forest land are disturbed annually* by fire

29,167 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

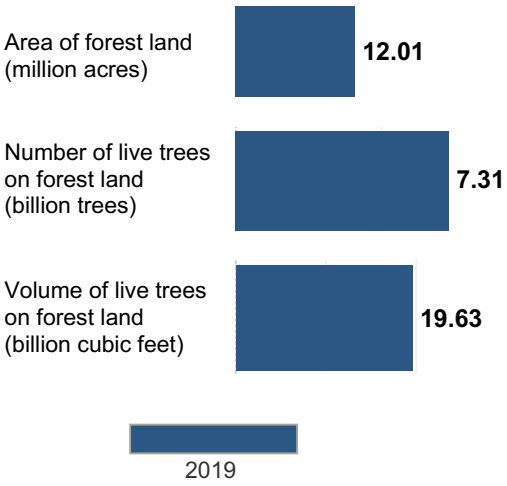
Forests of east Texas, 2019

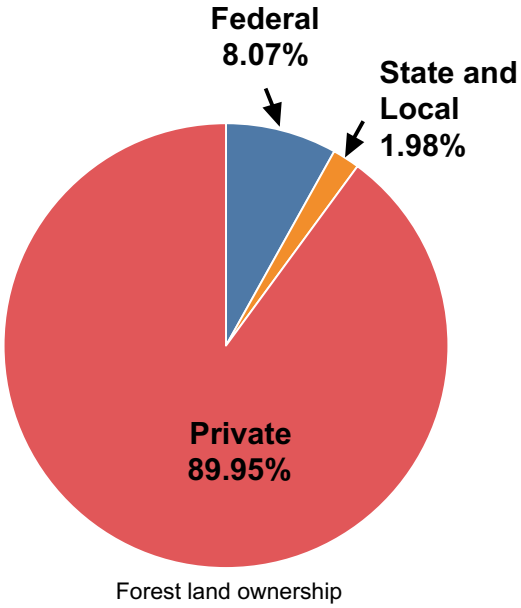
east Texas has an estimated **12,005,338** acres of forest land.

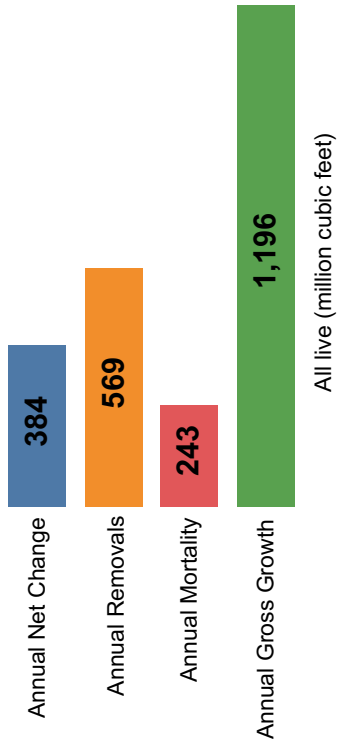
* Percent forest is forest area/total area. Percent forest with water removed from total area is 56%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in east Texas. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

east Texas has 3,836 sample plots across the State, of which 2,358 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







46,826 acres of nonforest revert back to forest annually*

75,706 acres of forest land convert annually* to nonforest

371,273 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

79,754 acres of forest land are disturbed annually* by fire

109,406 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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USDA United States Department of Agriculture

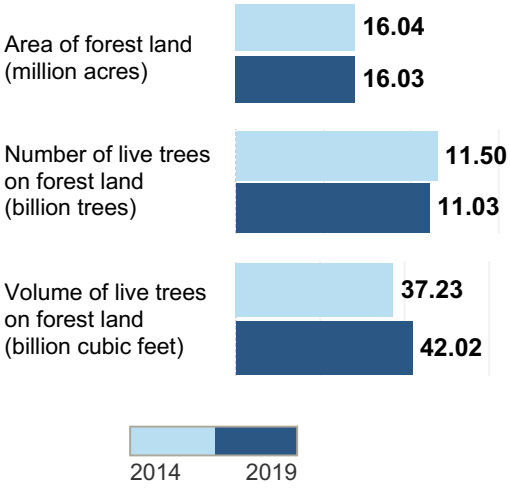
Forests of Virginia, 2019

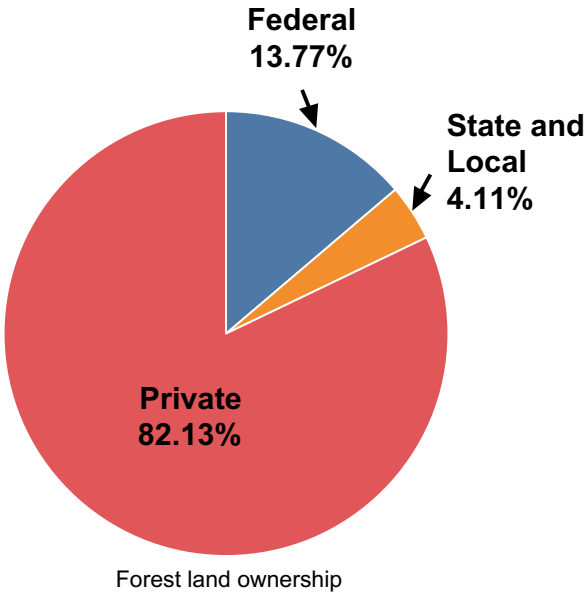
Virginia has an estimated **16,025,876** acres of forest land.

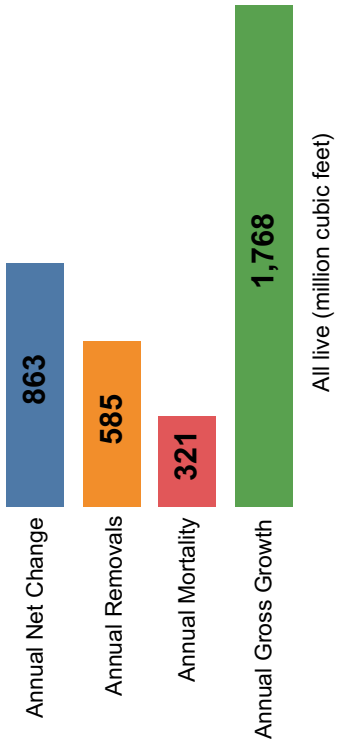
* Percent forest is forest area/total area. Percent forest with water removed from total area is 63%.

This resource update is a brief look at some of the basic metrics that describe the status of and changes to forest resources in Virginia. This information is based on field data collected using the USDA Forest Service Forest Inventory and Analysis (FIA) annualized sample design, and it is updated yearly.

Virginia has 4,799 sample plots across the State, of which 3,296 are currently forested. Each year, about 10-20 percent of these plots are visited and measured by field crews. Data used in this update were accessed from the FIA database on 06/01/2021.







56,359 acres of nonforest revert back to forest annually*

58,550 acres of forest land convert annually* to nonforest

212,158 acres of forest land are treated by cutting (harvest, thinning, etc.) annually*

25,974 acres of forest land are disturbed annually* by fire

16,745 acres of forest land are disturbed annually* by weather events

USDA Forest Service - Forest Inventory & Analysis

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