Management

Size Of Forest Holding And Family Forests: Implications For Forest Management In South Carolina

By: Brian L. Williams, Thomas J. Straka, and Richard A. Harper

There are about 11.3 million private forest owners in the United States; of those, 10.4 million are family forest owners who control 62% of the nation’s private timberland. South Carolina has about 262,000 family forest owners who control almost two-thirds of the state’s private timberland (Buller, 2008). In the recent past, these ownerships were generally called nonindustrial private forests (NIPF). Due to development and growth of various corporate ownerships, the definition of NIPF became muddied. Today this unincorporated individual, family trust estate, and partnership-owned timberland is called family forests.

Family forests have long been recognized as crucial to maintaining sustainable forests in the United States and crucial to national timber supply (Best, 2002). Ownership of small forests has been a fundamental issue in American forest policy since the early twentieth century. Some smaller ownerships were thought to perform management functions that are critical to maintaining the sustainability of America’s forests.

Management

Management plans: as the size of the forest holding increases, the percentage of owners with a management plan increases.

Management advice: as the size of the forest holding increases, the likelihood of an owner seeking management advice increases.

Absence ownership: as the size of the forest holding increases, the percentage of absentee ownership increases.

The NWOS was used to analyze the size and number of family forest holdings in South Carolina. Figures were developed to illustrate the impact of size of forest holding on important forest resource management activities and behaviors. There is one drawback in that the data set used to develop the figures sometimes contained rounding problems for the largest holdings. Given the small number of South Carolina owners in the largest size ownership classes, the results can be misleading for these holdings. South Carolina tends to strongly follow the national averages and in order to provide estimates of percentages for the largest holdings, we utilized national averages to approximate state averages.

Figure 2 shows timberland area and owners in South Carolina by size of forest holding. South Carolina follows the trends for the eastern United States quite closely. The number of owners decreases dramatically as tract size increases. This follows national trends in ownership, where forest owners of 50 or more acres hold 69% of the total family forest land, but only account for 11% of all owners. The vast majority of area is in the 100-999 acres class and the vast majority of owners are in the 1-9 acres class. While 60% of owners control the very smallest timberland acreage class (9 acres and less), about 60% of the acreage is in holdings of 100 acres and up. Nearly 95% of the timberland area is in holdings of ten acres and larger. How important are the 80% who own 5.7% of the timberland area? Should limited resources be used to encourage forest management of these tracts? Or, can the smallest tracts even be adequately managed? (NWOS Table Maker, 2012)

Figure 3 shows that as the size of the forest holding increases, the likelihood of an owner having a management plan increases. The percentages of South Carolina family forest owners having management plans are similar to that of national averages. For the largest holdings, the percent of area and owners with management plans is slightly higher than the national average. The difference between state and national percentages could be due to South Carolina landowners having an interest in timber production. Also, the national average is lower due to states without significant timberland. For example, in Nebraska, only 3% of the 100 to 999 acre class indicated having a management plan. (NWOS Table Maker, 2012)

Figure 4 shows the percentage of timberland area and owners in South Carolina who received forest management advice. Considerably greater or percentages of both owners and area receive cost-share programs increases.

Implications for South Carolina

As noted, private forest owners control most of the nation’s timberland. Most of that timberland is in the eastern United States, and much of it is in the South. Family forests make up the majority in terms of owners and acres. In South Carolina, there are 262,000 family forest owners, owning around 7.3 million acres of the state’s roughly 13 million acres of timberland (Buller, 2008). The breakdown of timberland ownership in South Carolina is similar to that of the United States as a whole.

Figure 1 shows how the change by tract size category for family forest ownerships in 2001 and 2010. Tract size for family forests has decreased in larger categories (greater than 50 acres), while smaller sizes are increasing. Over this ten-year period there was a 7% decline in tracts greater than 50 acres and a 13% increase in tracts less than 50 acres. (Source USDA Forest Service, FAA plot database.

The National Woodland Owners Survey (NWOS, 2012) is the official estimate of forest owners in the United States. It was created and is maintained by the USDA Forest Service. The NWOS provides useful information in understanding basic family forest behavior and demographics. The NWOS was used to analyze the size and number of family forest holdings in South Carolina. Figures were developed to illustrate the impact of size of forest holding on important forest resource management activities and behaviors. There is one drawback in that the data set used to develop the figures sometimes contained rounding problems for the largest holdings. Given the small number of South Carolina owners in the largest size ownership classes, the results can be misleading for some of these holdings.

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Forest ownership/family forests, continued

advice relative to having a management plan. South Carolina owners have slightly higher percentages than national averages. Nationally, about 14% of family forest owners controlling 37% of family timberland receive forest management advice and 4% of family forest owners controlling 17% of family timberland have a management plan. For South Carolina, the percentage of family forest owners is similar to national averages; however, 54% of timberland has owners receiving advice and this accounts for 14% of family forest owners in the state. Mississippi and Alabama have trends similar to South Carolina's. (NWOS Table Maker, 2012)

are continuously changing due to natural forces, forest management decisions, and land-use changes. Family forests represent 55% of the state's timberland area and 53% of the timber inventory. Parcelization driven by commercial development, estate transfer, and cost-share, or have owners concerned with timber production. Family forests are decreasing in size as the number of owners increases. There are implications to use change are causing these forests to move into smaller tracts or leases, receiving significant changes. Smaller tracts are less likely to receive forest management services, cost-share, or have owners concerned with timber production. Family forests are critical to the timber supply that drives a large segment of the state's economy. The state's forest tracts are decreasing in size as the number of owners increases. There are implications to South Carolina that can have long-term impacts on the sustainability of the state's forests and other natural resources.

Literature Cited

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2012 SC Teachers' Tour. The outdoor environmental education course, will be held June 26-28, 2012 in the Midlands region. It will provide participants with an unbiased look at the impact forests have on our state's environment, economy, and quality of life. Key topics will include forest management; emphasizing sustainable forestry, ecosystem management and bio-diversity; wildlife conservation, including endangered species protection; forest product production, including harvesting and processing into products, and contributions of forest industry to SC's economy.

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RESEARCH: Climate Change & People's Use Of The Outdoors

Is climate change affecting the way people spend their time outdoors? Warming researchers want to know. The school has several climate change projects in the works, and a handful are now looking at what global warming is doing to natural lands. One focuses on how forests can help reduce a community's vulnerability to rising heat.

Although climate change continues to be a polarizing political topic, it is widely accepted in the scientific community. Global warming, researchers say, has far-reaching effects that can harm more than just the obvious, like melting glaciers. It could have a widespread impact, said Dr. Neelam Poudyal, assistant professor of Natural Resources Recreation and Tourism. But some scientists are now looking into the less tangible effects climate change could have.

Poudyal is teaming up with Dr. Nate Nibbelink, associate professor in GIS and spatial ecology, on a US Forest Service project to identify "hotspots" of change — where the multiple impacts of human population growth and climate change might intersect to stress our natural lands. They will use spatial statistics and mapping tools in a geographic information system (GIS) to identify areas where projected future impacts to natural resources — such as intact forests, biodiversity and water availability — will show the greatest change from current conditions. Nibbelink said the study should increase understanding of how natural lands in the nation are likely to be affected by both human pressures and global climate change. Experts are predicting that by the year 2060, urban land use will likely increase by 70 million acres, resulting in a loss of forest, cropland, pasture and rangeland.

Dr. Jeff Heginst-Cymerman, a landscape ecologist in Warnell, and Poudyal have started a project that will examine how forest resources could be used to offset a community's vulnerability to heat effects, such as heat stroke and heat exhaustion, which are likely to increase as climate change affects the way people spend their time outdoors.

The proximity of the Santee to the ocean and to a major expanding urban area makes it a site where scientists can study sea level rise and continued water quality research. Its four watersheds deliver critical information about stream flow, and its 700-acre site is one of 80 experimental forests across the country, and the only one in the Atlantic Coastal Plain of the southeastern United States.

Located on Francis Marion National Forest, the experimental forest includes all major forest types of the southeastern Atlantic Coastal Plain, providing opportunities to conduct research on forest management and soils and water quality and quantity research. Its four watersheds deliver critical information about stream flow, groundwater level, and precipitation in one of the largest undeveloped tracts in the region. The Santee and its counterparts in other states address natural resource issues facing the country, including changing weather patterns, the role of forest in carbon cycling, and the development of forest management practices to provide biomass for energy and ensure fresh water resources," Rob Doudrick, SRS Director, said.

Experimental forests like the Santee make it possible to understand the impacts that urbanization, changing and extreme weather patterns, and invasive species have on forests, watersheds, and wildlife habitat over time. The site is part of the USDA Forest Service's Southern Research Station.

Forest Service researcher Davendra Amaty explains hydrological research at the Santee Experimental Forest.

Sanitee Experimental Forest Reaches Milestone

SCA AWARD NOMINATIONS SOUGHT

The SC Forestry Association is now accepting nominations for its 2012 awards program. Nominate an individual who has gone above the call of duty to make lasting contributions to forestry. The two categories are: Charles H. Flory Distinguished Service Award and Outstanding Logger of the Year Award. Deadline is June 25, 2012. Forms are available at www.scforestry.org (Awards section). For more information: 803/798-4170, Ext. 13, scca@scforestry.org.