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A Southeastern Perspective on Forest Health

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A SOUTHEASTERN PERSPECTIVE ON FOREST HEALTH

Chairman McClintock, Vice-Chairman Westerman, Ranking Member Hanabusa, Members of the Committee, thank you for the opportunity to speak on forest health, specifically from a Southeast perspective. Fifteen years ago I worked hard with this honorable committee and the Congress regarding the Healthy Forests Restoration Act. Many of you spent a lot of time on it as well and many of us in the conservation community appreciate it.

I am here in three capacities, all related to my message for you today. I am executive director of Wildlife Mississippi and vice president of the Boone and Crockett Club. I am also here today as a certified fisheries and wildlife biologist and a forest landowner in both Mississippi and Arkansas. Wildlife Mississippi is unusual among conservation organizations. We don't simply advocate for our mission, we put conservation on the ground, restoring and managing forests, grasslands and coastal habitats. We have a forest economist on staff. My family's 140 acres, which have been in the family since 1833, have undergone many changes from cotton to cattle/corn to timber/wildlife today. We are currently in a timber salvage operation after an F2 tornado hit our farm 2 weeks ago. My wife, who was the first female chair of the Mississippi Commission on Environmental Quality, manages the forest land on her side of the family which is bordered by federal forests.

The Boone and Crockett Club was founded in 1887 by Theodore Roosevelt. Key members of the Club have included Theodore Roosevelt, George Bird Grinnell, Gifford Pinchot, John Lacey, Ding Darling and Aldo Leopold. The Club, through Roosevelt and these early leaders of the American conservation movement, saw a crisis in humanity's impact on wildlife and their habitat and called people to action to change America's direction. The Club's early efforts were aimed at the development and passage by the Congress of the Timberland Reserve Act in 1891, which reserved approximately 36 million acres for national forests. The Club has established a legacy of historic achievements in shaping the conservation policies of the United States. The legacy of the Club was built upon the following cornerstones of the conservation movement: creation and establishment of the National Forest System, National Park System, National Wildlife Refuge System and the federal agencies to oversee those systems; the establishment of modern day game laws; and promoting ethical hunting of wildlife. In the past 20 years, the Club has worked to create a system for the conservation for private lands.

Reforms are needed nationwide, not only in the western U.S. where the role of the federal government is largest. Fire is the biggest issue and must be addressed at its root cause, which is the fire-prone condition of U.S. forests, particularly on public lands. The costs of wild fire and other forest management issues is a secondary issue that can be solved by promoting more management because forestry–like wildlife conservation–can pay its own bills. These organizations and I personally support reforms in forest conservation.

Overview of Southeast and Private Lands

Healthy forests comprise more than just forest management and fire prevention on public lands. According to the U.S. Department of Agriculture, nationwide, public forestlands comprise 316 million acres (37.11%) and private forestlands comprise 423 million acres (62.89%), predominantly in the Eastern United States. Although in many ways these private lands are a model for achieving healthy forests through active management for multiple uses, it is also important to recognize the challenges to maintaining and improving the health of these privately owned forests.

According to the data from the USDA Forest Service Southern Research Station's report titled *The Southern Forest Futures Project: Summary Report*, private landowners hold 86 percent of the forest land in the South and provide for nearly all of the timber harvesting in the region. Southern forests develop more rapidly than forests in other regions, partly due to the fast growth rate of native trees and partly due to the humid temperate and subtropical climates. This makes Southern forests unique, exceptionally diverse and nationally significant. Nationwide, the South alone provides 61 percent of the nation's timber supply, making it the largest producer of timber compared to any country in the world.

According to the project, there are several primary factors affecting Southeastern forests. The primary ones are population growth–by 2060, the South's human population is expected to increase by 40 to 60 percent– and invasive species. New invasive insects, diseases and pests are emerging across the region.

And, while our nation depends so heavily on private forests to produce the thousands of wood products we need every day, we also depend on these same forests to provide many other services that benefit society, for most of which private landowners never receive compensation. These services to society include producing oxygen, sequestering carbon dioxide, filtering air and water, providing fish and wildlife habitat (including for threatened and endangered species), improving the aesthetic beauty of the natural landscape and providing opportunities for recreation and solitude, just to name a few.

We as a nation have come to expect all of this from private forest landowners while rarely giving thought to how they can afford to provide these services when it costs them. It is a cost that can only be recovered through the selling of timber, or by divesting of the land. In other words, we depend on private forest landowners to invest in land and timber management activities, often with a 50- to 100-year investment time frame, in hopes that the eventual timber value will be sufficient to offset the cost of owning and managing the land. Add to this the fact that federal and state taxes reduce pre-tax values of family-owned forest land, property taxes contribute to the conversion of some forest land in states with higher property tax rates and estate taxes can encourage land sales to cover the taxes.

While this may be possible for some private landowners, many small and medium-sized landowners continue to find it difficult, if not impossible, to invest in active and sustainable management of healthy forests over such a long time. Add to this the regulatory uncertainty limiting land management options, as well as the campaign against the use of wood products, and it is easy to see why more and more private

forest landowners are choosing to divest of their lands. These lands are rapidly being developed and broken into smaller units that cannot sustain many of the benefits and services society depends on from these lands.

It is estimated that private lands provide habitat for 90 percent of our nation's endangered species. The South has the largest percentage of listed species in the nation. For example, 7 of the top 10 states/territories with the most listings are in the South; they include: Alabama (127), Florida (131), Georgia (70), Tennessee (94), Texas (96), Virginia (71) and Puerto Rico (71). Mississippi has 46.

While private forestlands are generally in better condition than public lands, according the Southern Forest Resource Assessment of 2002, there are substantial opportunities to reach out to the nation's private, forest landowners in ways that will assist them in better protecting and managing these resources.

Now, let me discuss the primary issues and make a few recommendations.

Fire

Whether you are talking about the West or the Southeast, there are big problems on national forests regarding fire. More than 60 million acres of national forests are at high risk of wildfire or in need of restoration. More than 40 million acres are in the interior West alone. In the past 10 years, over 65 million acres have burned. Approximately 10 million acres burned in 2015, killing 11 firefighters. Federal foresters estimate that an astounding 190 million acres of land managed by the Departments of Agriculture and the Interior are at unnatural risk to catastrophic wildfire, millions of which are infected by insect and disease.

As this hearing is being conducted, over 150,000 acres of the Okefenokee Swamp are burning in Georgia. Approximately 40 percent of the fire is burning outside of this national wildlife refuge. More than 600,000 acres burned in 2007. We had a wildfire on my wife's land in 2016, as well as many others across the Southeast.

From a Forest Service perspective, wildfires average 6.9 million acres burned annually since 2000. It was approximately 3 million acres annually before 2000. In 1995, fire made up 16 percent of their annual appropriated budget. In 2015, fire made up 52 percent of their appropriated budget. That is a decrease in 36 percent of their funds that would be used for other activities, including research, forest improvements and maintenance.

We must solve the wildfire funding issue. Stop fire borrowing and the delay it places on scheduled work and budgets. This is an important first step.

Focus on money and dealing with fire–not preventing fire–that's where forest reform comes in. Without giving the agencies the ability to work more quickly and efficiently, we cannot put forest management on the ground quickly enough.

For 100 years land managers have aggressively moved to suppress wildland fire in all forms, including nature's periodic small-scale burnings that restore and rejuvenate forest ecosystems. The unintended result of this policy is a decades-long build up of forest fuel, woody biomass and dense underbrush that's as close as the next lightning strike or escaped camp fire from exploding into a massive conflagration. In some areas, tree density has increased from 50 trees per acre to as many as 500 trees per acre, according to the Forest Service and fire ecologists. These unnaturally dense forests are a small ignition away from a large wildfire. They are also acutely susceptible to broadly

destructive bug and insect outbreaks.

Forest ecologists, professional land managers and many environmental groups agree–the exploding incidence of catastrophic wildfire and disease and insect infestation pose a massive threat to the health, diversity, and sustainability of America's forests. The Nature Conservancy, one of the world's largest and most acclaimed environmental groups, has been a leader in the environmental community in building public awareness about the environmental calamities that catastrophic wildfires cause.

Using 21st century techniques, technology and know-how, professional land managers can restore America's cherished landscapes back to a healthy, natural condition. Through the use of environmentally smart thinning, prescribed burns and other scientifically validated management practices, overstocked forests can be returned to a natural balance, and the risks of catastrophic wildfire and insect and disease infestations reduced–and the associated expenditure of dollars.

While there are millions and millions of acres of federal lands at high risk of catastrophic wildfire, federal land managers will treat only about 2.5 million acres each year because of the extraordinarily lengthy procedural and documentation requirements that federal land managers face. As proof, the Forest Service testified that one important project near a major metropolitan city and its primary source of municipal water had to endure an 800-step decision making process and 3 years before implementation. Unfortunately, before this drawn-out process was complete, a record-setting wildfire eviscerated large swaths of the landscape, causing enormous damage to the natural environment and a number of communities.

Wildfires do not respect ownership boundaries. Because many of our federal forests are at such a great risk to wildfire, there is an increase in risk of wildfire on private lands. They are an equal opportunity destroyer.

Finally, if you are interested in climate change, you can't separate the cause, as well as contributor to the solution, from active forest management and good forest health. They are linked. Wildlife fires emit carbon that contributes to poor air quality. Healthy forests, as well as forest products, are a carbon sink, sequestering carbon that would otherwise be emitted into the atmosphere.

Disease, Insect Infestation and Invasive Species

As America's forest ecosystems are being decimated at an alarming rate by large-scale catastrophic wildfire, another problem is the massive outbreaks of disease, insect infestation and invasive species, especially across the South.

Over the next 50 years, diseases and nonnative invasive insects will seriously impact our Southern forests.

Chestnut blight is one example of a disease that virtually wiped out the Amercian chestnut. Attempts are being made to use science to breed a chestnut hybrid clone that is resistant to the blight. Wildlife Mississippi is pleased to be a part of this effort.

Flowering dogwood trees have been declining for the past 3 decades due to dogwood anthracnose. These trees are an important source of soft mast for over 100 species of wildlife and an important cultural aspect in Southern society.

Laurel wilt is an insect transmitted disease by the ambrosia beetle that is decimating the hardwood, redbay. The beetle bores into the sapwood and inoculates

the tree with the disease. Rapid dieback occurs due to the leaves wilting and the sapwood being infected.

The emerald ash borer is a devastating, wood-boring beetle that has already killed tens of millions of ash trees and is a serious threat to the ash resource. There are 16 species of ash that, ecologically, that fill a number of niches, from riparian areas to upland forests.

Pine plantations in the South are being affected by the Southen pine beetle. It is the most damaging insect in Southern pine forests since it attacks healthy pines and is considered one of the most important causes of economic loss in forestry. A historical review of the damage inflicted by the beetle estimated that from 1960 to 1990, the beetle caused $900 million in damage. Personally, we are losing 5 to 10 percent of my family's loblolly pine to beetles in overly stressed trees from last year's drought.

According to the USDA Forest Service Southern Research Station's report titled *The Southern Forest Futures Project: Summary Report*, of the 380-plus recognized invasive plants in Southern forests and grasslands (more than 330 terrestrials and 48 aquatics) 53 are ranked as high-to-medium risk to natural communities. Only recently has the extent of invasive plant occupation in the Southern United States and elsewhere in the world been realized. Colton and Alpert (1998) report that the extent and spread of nonnative plant species over the past several decades has taken most people by surprise, and is still not comprehended by most citizens and policymakers.

The spread of invasive trees has also increased dramatically. The Chinese tallowtree covers more than a half million acres and in projected to increase by 45 percent over the next 50 years. The spread of this tree has been facilitated by floodwaters into wetlands, wet prairies and damaged forests. The numbers of tallowtree in Louisiana, Mississippi and Eastern Texas have been reported to increase by 370 percent from the 1990s to 2005.

Invasive nonnative shrubs often occur as dense understory layers in forests and outcompete native plants and prevent natural regeneration of the native overstory trees. Chinese and Japanese Privet is one such example. It is the second most abundant invasive plant in the South. It is predicted that by 2060 there will be 37 percent more privet cover, which would amount to 1.2 million more acres.

One of the most notorious Southern invasive plants is kudzu. It is a vine that grows at an alarming fast rate and will cover land and trees since it is shade tolerant. What most don't know is that Japanese honeysuckle is actually the most rampant invasive species. It is threatening forests in all states and terrains. The spread of this vine is projected to increase by 31 percent over the next 50 years, remaining the most occupying forest invasive species in the South.

Another good example is cogongrass. It is fire-adapted and precludes forest regeneration in affected forests. This will create long-term changes in plant and animal assemblages, displace wildlife and change forest productivity.

A friend of mine sent me a photo of a "welcome sign" on a federal public area not long ago and there was not a single native species surrounding the sign–and the sign is located on the way to their headquarters which the staff passes by every day!

Wild hogs are becoming one of, if not the worst, invasive species to control. They have already expanded to 45 states. In just 10 years, a few hogs can multiply to over 600. Crop depredation is devastating where you have a substantial population of hogs;

also competition with wildlife is a serious problem. Wild hogs also negatively impact forest regeneration.

All of these species exist on federal lands in the South. It is almost impossible for private forest owners to control and eradicate these invasive species when federal lands are serving as a breeding ground for them. The damage and control cost of these invasive species has been estimated in the billions of dollars and this number will only increase over time.

Impacts on Wildlife

Professionally trained wildlife biologists and foresters know that forest diversity at the landscape level is the key to proper management achieving species diversity. There are four fundamental criteria each forest-dwelling wildlife species needs for survival: food, water, shelter and space. Depending on how a forest is managed, various amounts of these criteria become available to the wildlife living there. Many wildlife managers and foresters consider active management the best solution to meet the habitat requirements of the largest variety of species. Active management reduces canopy closure and creates young forest habitat, which provides adequate food sources, nesting habitat and hiding places for forest wildlife. Throughout the United States, we are losing this diversity on a landscape-level scale, in many cases because our forests are becoming more homogenized and over-mature. Young forest goals are not being met. This is not just in the West, but also in the North, Midwest and South (i.e., Nantahala-Pisgah–0.4 percent of forest–plan calls for at least 5 percent). On average, 0.05 percent of the lands in the National Forest System are being thinned per year.

From a hunter perspective, canopy closure creates reduced hunter success rates, which leads to fewer license sales, which equates to less money for state fish and wildlife agencies. This is especially true with mule deer and elk in the West and white-tailed deer in the East; these species depend on early forest successional stages for forbs, shrubs and other food sources. The decline in conservation projects has resulted in a precipitous decline in species that are dependent on young forest habitat. According to the National Wild Turkey Federation: 1) Wild turkeys have experienced a 15 percent decline nationwide–some areas more; 2) In last 20 years, 59 percent of bird species dependent on young forests have declined, including songbirds like the golden-winged warbler, which is a under review for an Endangered Species Act (ESA) listing; 3) Willamette in Oregon–71 species dependent solely on young forest habitat are in decline. The U.S. Forest Service has recognized the need for young forest habitat and it allocates funding and guidance to provide such habitat for threatened and endangered species, including the gopher tortoise and red-cockaded woodpecker. However, the pace of creating young forest habitat for these, and hundreds of other wildlife species, needs to be greatly increased.

Resiliency – Good Environment, Good Economy, Markets

The management of healthy forests–including my own–are made economically feasible through the harvest and sale of forest products and timber. The activities also help offset the costs associated with other forest and wildlife management activities such as reforestation, invasive species control, prescribed fire and timber stand

improvements. Without the funding that sustainable forest management provides the landowner (including the federal government), we are likely to see less forest management, which in turn, will exacerbate the problems of wildfire, decreased forest health, endangered species and water quality. Additionally, without the revenue that active forest management provides, we are likely to see increased land conversion to non-forested uses and the loss of the basic operational capacity (i.e., loggers and mills) to accomplish on-the-ground, sustainable forest management that results in healthy, resilient forests important for a wide variety of ecological benefits, not to mention the economic benefits to rural America. From an industry perspective, there is a steep decline in forest health in states that have no industry: Arizona, Colorado and New Mexico.

We can't rely solely on state and private lands to continue to supply the timber industry with the fiber necessary to meet our forest product needs. Our nation's federal lands also play a vital role in maintaining healthy forests that are resilient to threats at a landscape level. The sustainability of this industry is critical for us to economically maximize the benefits of a healthy forest and fight the threats of wildfire, insects and disease. As stated earlier, if the health and vitality of our federal forests are not addressed, devastating wildfires and insect and disease epidemics will spread to adjacent state and private forestlands, thereby undermining other efforts to maintain healthy forests for our nation. Without the forest products provided by our federal lands, the ability to manage for healthy forests across a landscape, regardless of ownership (i.e. federal, state or private), is severely threatened.

Managing forests makes them resilient and able to withstand fire, pests and diseases. Management eliminates or reduces the impact of catastrophic wildfire; protects riparian areas important for stream health (shade, filtering, etc.) and fish species such as trout; and protects water quality due to fires followed by rains sediments to wash downstream damaging important drinking water supplies.

When something has value, people will protect it. When Southeastern forests have value as trees (economic, aesthetic, hunting, carbon credits, incentives for recovering threatened and endangered species, etc.), they will be protected, restored and enhanced. When they don't, there is a greater chance they will be turned into other uses, such as subdivisions, pasture and row crop agriculture. I serve as a Presidential appointment on the Binational Softwood Lumber Council, whose goal is to increase demand for dimensional wood products, and I have served as Chair of the Mississippi Institute for Forest Inventory. Forest inventory data that was gained with scientifically acceptable forest inventory techniques shows that Mississippi is growing far more tree volume than is being harvested, so it is easily sustainable. With good inventory data, it is easy to work with economic developers to strategically locate mills to process wood so that the area that mill services is growing more wood than they are harvesting. The result is a resilient forest that is providing benefits to both the environment and the economy.

I am much more worried about the threat to our forests from a lack of harvest than from over harvest as the huge loss of logging and mill capacity as new housing starts are still low.

Let me provide a few examples of how market conditions affect forest conservation activities. On the Theodore Roosevelt National Wildlife Refuge Complex in

Mississippi, they recently thinned a stand a bottomland hardwoods. There are no markets nearby, pellet or otherwise, so the trees were cut and left to rot on the forest floor, emitting carbon into the atmosphere. I wish a pellet mill had been available to offset the use of petroleum-based products for energy, but it wasn't. Nor was a mill to make hardwood boards for furniture, further sequestering carbon. Or even use the proceeds from the thinning to better improve the Refuge.

Not long ago, I was meeting with a landowner in Simpson County, Mississippi, and when I told her that by controlling the privet in her longleaf pine stand (first with chemicals, then maintained with prescribed fire), she could gain more money in longleaf pine tree volume (for board feet, poles and carbon credits) than the cost of eradicating the invasive species, she decided to proceed with the control.

On a personal note, my mother's 140 acres in Montgomery County, Mississippi was thinned several years ago. We sprayed the kudzu and Chinese privet and restored 13 acres of wetlands. It is in better shape today than it has been in 80 years. We used the profits from the timber thin to pay for the invasive species control and the wetland restoration.

What can you do?

There is a need to address the issue holistically on federal, state and private forests. Practically–wildfire and forest management knows no boundary line for fire, insects, disease, etc. Politically–as this committee works to craft forest legislation, try not to make it primarily a Northwest bill; include the Southeast which is primarily private lands and potential political allies. We need a bipartisan forest reform bill that can pass both chambers.

Recognize and embrace markets to increase the consumption of wood and wood products, require–or work with other committees to require–the use of wood in federal and state construction and work to increase the use of wood-based energy, etc. While biomass can play the most significant role, new housing starts, the predominant usage of wood, is improving. Trends in the number of new housing starts by year are: 1960 – 2,000,000; 1970 – 1,000,000; 1980 – 1,500,000; 1990 – 1,800,000; 1997 – 2,200,000; 2010 – 600,000; and 2015 – 1,200,000.

Mr. Chairman, Vice-Chairman Westerman and Ranking Member Hanabusa, this concludes my remarks. I will glad to respond to any questions that you or other members of the Committee may have.

Thank you for the opportunity to appear before you.