Testimony of
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On behalf of the Society of American Foresters (SAF)

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Subcommittee on Department Operations, Oversight, Nutrition, and Forestry
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Chairman Peterson, Chairman Holden, and members of the Committee, thank you for the opportunity to testify on the important topic of our Nation's forests. On behalf of the Society of American Foresters, I would also like to thank you for your tireless work to improve the Renewable Fuels Standard (RFS) passed in the 2007 Energy Bill.

My name is Matthew Smith, I am a Private Consulting Forester, SAF certified forester, Member of the Association of Consulting Foresters, Adjunct Professor of Forestry at SUNY Environmental Science and Forestry in Syracuse, NY, Sustainable Forestry Auditor, Member of the Chicago Climate Exchange Forestry Committee, and Director of Ecosystem Services at FORECON Inc. I am here today representing the Society of American Foresters for which I serve as Western New York Chairman, and member of the SAF Climate Change Task Force.

The Society of American Foresters (SAF) is the national scientific and educational organization representing the forestry profession in the United States. Founded in 1900 by Gifford Pinchot, the first Chief of the Forest Service, SAF was chartered to advance the science, education, technology, and practice of forestry for the benefit of society. Today SAF publishes several scientific peer-reviewed journals, certifies foresters and accredits forestry schools among other things. With over 14,000 members SAF is largest professional forestry society in the world. SAF members include natural resource professionals in public and private settings, researchers, CEOs, administrators, educators, and students.

Our Forests:

The United States is blessed with abundant forest resources. In fact the US holds approximately eight percent of the world's forests, placing it among the top 4 countries in the world. The US forest base is estimated at some 755 million acres, and has been stable at this level for about the last 100 years. The US forests are dominated by private non industrial landowners, which combined own roughly 57% of the forests in the country. This forest base is however, dynamic, with about one million acres of forest lost to other land uses annually. Fortunately, these losses are typically offset by new forest establishment, such as abandoned agricultural land, in other regions.

While America's forests are fairly stable in area, they grow in volume, with growth exceeding removals over the past 50 years. Advances in forest management techniques along with natural factors have resulted in increased production from our forest base. In spite of this increased production of wood volume, US demand for forest products still exceeds annual production by 4.2 million cubic feet. As a result, the US imports approximately 36% of its wood products annually. The import of wood products to American shores raises key environmental concerns as much of this supply can come from regions without the environmental and sustainable qualities of wood that is grown domestically.

Forests are inseparably linked to American society and culture. Forests give us innumerable benefits including; wood products, jobs, food, fuel, clean air, carbon uptake and storage, recreation opportunities, clean water, cultural benefits, open space, wildlife, biodiversity, scenic landscapes, and many more. Forests are unique as a natural resource because they can provide these values in concert with one another, on a renewable basis, through sound sustainable forest management.

I'd like to illustrate the critical contribution forests make to America by taking a brief look at my home State of New York. When most people think of New York, they think of Time Square, Broadway musicals, and sky scrapers. Most people have little appreciation for how significant the forest resources in New York are, or how important they are to our State-wide economy. New York State currently has an estimated 18.8 million acres of forests (61% of land area), owned primarily by private landowners. These forests provide NY with over 55,000 jobs in rural communities, and have an estimated net economic impact of almost $12 billion dollars each year. Recently, with the downturn in housing starts, increased energy costs, and depressed wood product markets many of these jobs have been lost, resulting in a significant reduction in the economic contribution realized from the forest economy. The situation in New York is just an example of what is happening across the country. Forests, and the communities that rely on them, are under pressure from both human influence, and natural factors.

Challenges for the Future of America's Forests

The story of America's forests contains many successes, including their abundance, diversity, ecological services, recreational opportunities, and vast array of wood products they produce. Many times, however, it is the challenges to our forest resources that we hear the most about, and understandably so. Catastrophic wildfires, invasive species, changes in land use (deforestation), climate change, global competition, and increased demand for traditional and emerging forest products are just some of the challenges we face.

In the past five years, over 42 million acres of federal forests has burned in the US. In 2006 wildfires in the US burned nearly 10 million acres, cost $1.9 billion to suppress, and were 166% greater in extent than the previous 10-year average. Due to climate change and public land management practices, future fires are likely to be more severe, cost more to suppress, and have greater impacts on air and water quality, wildlife habitat and infrastructure. Current estimates show that 180 million acres of federal forests in the US are at an

unnaturally high risk of catastrophic wildfire. At present, harvest levels on national forests are about one-eighth of the growth resulting in forests that are overly dense, unhealthy and prone to unnaturally severe wildfire. In Oregon, tree mortality on federal lands from insects, disease, and fire is reported to be six times the level of harvest. Though there is some debate, it is generally agreed that continuation of this situation will not lead to healthy, sustainable forests that store carbon and serve the national interests. In eastern Washington, federal forests will soon become a source of carbon emissions rather than a sink due to decay from insect and disease infestation and catastrophic wildfires. This picture is true of many of our federal forests, especially those in the West.

In 2006, almost eight percent of US forests (58 million acres) were at significant risk to insects and disease, either natural or introduced. This issue continues to be of significance nation wide, perhaps most significantly with the spread of Mountain Pine Beetle in the Western US. In New York we are also battling infestations of foreign pests such as Sirex Wood Wasp, Asian Long Horned Beetle, Hemlock Wooly Adelgid, and potentially the Emerald Ash Borer in our forests. The impacts of a warming climate on insect and disease pathogens is largely unknown. It is believed, however, that forest pests held in check by winter low temperatures may spread as the average temperature increases.

Perhaps the greatest challenge our forests face is forest loss to alternative land uses. As our US population grows, it is estimated that approximately 44 million acres of private forestland in the US could experience drastic increases in housing density in the next three decades. As has been stated above, the host of values presented by forests are significant, however these benefits are only realized if the forests stay as forests. Frequently, forest loss can be attributed to a failure to recognize all of the values presented by the forested property.

Hand in hand with keeping forests intact is having healthy and integrated markets for forest products and services. Landowners are much more likely to keep and manage their forestland if they have value as forests. This key component to preventing forest conversion is often overlooked and/or misunderstood by Congress. Emerging markets, such as ecosystem services, renewable energy and carbon offset projects, could also help to keep forests forested by adding an additional revenue stream to landowners. At the moment, however, we have a Renewable Fuels Standard that needlessly restricts most woody biomass, a cap and trade bill that doesn't recognize domestic forests and an energy bill with a Renewable Energy Standard that restricts woody biomass. All of these provisions, we are told, are in place to 'protect' forests. To be perfectly clear, these policies will only harm our domestic forests and leave foresters with fewer options to manage forestland for the benefit of society.

Meeting the needs of a growing global demand for forest values in the face of these challenges is a reality we face for the future. As our population grows and spreads into the rural areas of our country, and as the impacts of a warming climate are realized, these pressures will increase exponentially. These challenges can only be addressed with thoughtful, deliberate, sustainable forest management.

The SAF Climate Change Task Force Report 2009

In response to the growing concern about anthropogenic climate change and the diverse opinions that exist on the impact it would have on forests, the SAF assembled a group of 12 experts from across the country to form the SAF Climate Change Task Force. The group was assembled in 2007 and was charged with reviewing the body of available research on climate change, clean energy, forestry, and carbon sequestration. The objective for this group was to inform its membership and the public by summarizing the most current and best available research in the form of a Task Force report. The report was completed in 2008 and was published early in 2009. The end result is a very comprehensive and current presentation of the science of climate change as it impacts and is impacted by forest resources and the role forests play in the global climate budget. The findings of the report are summarized below.

Forests are shaped by climate. Changes in temperature and precipitation regimes have the potential to dramatically impact forests nationwide. Climate is also shaped by forests. This interrelationship means that dramatic change to one will somehow influence the other. Climate change has the potential to transform entire forest systems, shifting forest distribution and composition.

Wood products from sustainably managed forests can be replenished continually, providing a plentiful and dependable supply of both trees and wood products. Substituting wood for fossil fuel-intensive products can substantially improve environmental performance and store carbon in wood products while also supporting other ecological services, such as clean water, clean air, wildlife habitat, and recreation. Life Cycle Inventory analysis reveals that when wood products in construction are used instead of steel, concrete, brick or vinyl materials, the wood products store more carbon and use less fossil energy.

Green House Gas (GHG) emissions can be reduced through the substitution of biomass for fossil fuels to produce heat, electricity, and transportation fuels. Biomass can also be used to produce a wide range of plastics and chemicals traditionally made from fossil fuels. Product substitution involves the use of biomass to replace products that would emit more GHG per functional unit. While some of the increasing need for sustainable electric power can be met by renewable energy sources such as solar and wind, biomass is the only renewable that can meet our demand for carbon-based liquid fuels and chemicals.

Wildland fires are a major contributor to national and international GHG emissions. The EPA has estimated that wildfire emissions in the lower 48 States and Alaska released an average of 105.5 million metric tons/year (range: 65.3 to 152.8) of carbon dioxide into the air from 2000 to 2005. Active forest management to improve forest health and reduce hazardous fuels can dramatically reduce CO_2 emissions while also enhancing wildlife habitat, recreational and scenic values, and reducing the threat of wildfires to communities and critical infrastructure. This management can also contribute to the health of rural communities and economies by providing family-wage jobs.

Land use change from forests to non-forest use releases carbon and other GHG's stored in forests. No other anthropocentric activity, besides energy production, releases more carbon

emissions globally: 150 billion tons or 33 percent of the total emissions between 1850 and 1998. While this is mostly an international problem and U.S. forestland area has remained relatively stable since the 1920s, forest land use and carbon policies need to encourage the retention and enhancement of forestland. Again, healthy and diverse markets will play a large role in preventing forestland loss.

Managed forests are unique in that they contribute to GHG reduction while simultaneously providing essential environmental and social benefits including clean water, wildlife habitat, recreation, forest products, and other values and uses. The important metric is net carbon uptake and storage. Forests of all ages and types have remarkable capacity to sequester and store carbon. Enhancement of this capacity depends on active, informed forest management.

Market-based instruments encourage environmentally sound behavior through market signals rather than through explicit directives regarding pollution control levels or methods. When well designed and implemented, these instruments will create incentives that alter the producer's pollution control strategy in ways that benefit the producer while meeting pollution reduction policy goals. Market-based climate change policy instruments provide economic incentives that promote innovation in the development of pollution abatement technologies because it is always in the entity's best interest to do so.

It seems surprising that society currently seems reluctant to embrace forest conservation and management as part of the climate change solution. Time is of the essence and the forestry profession must transmit a clear, urgent message to society that global warming is probable and forest management can mitigate climate change effects. History has repeatedly demonstrated that the health and welfare of human society is fundamentally dependent on the health and welfare of a nation's forests. Society at large, the U.S. Congress, and State legislators must not only appreciate this fact, but also recognize that the sustainable management of forests can, to a substantial degree, mitigate the dire effects of atmospheric pollution and global climate change.

A Unique Opportunity in Time

Ours is an exciting time to be working in the environmental field. The increased environmental focus generated by concerns centered on climate change is creating increased opportunities in the area of forestry. New products such as biomass and bio-fuels, voluntary greenhouse gas reduction (cap and trade) programs for forest offsets, and the development of ecosystem markets for forest based services such as water and biodiversity are transforming how we view and value our forests. The capture and recognition of these new products and services from forests stand to have significant positive impacts on forests and forestry in the US.

The emerging markets for forestry derivatives like carbon credits and biomass are proven to have significant positive impacts on climate change. The realization of income streams from these products holds huge potential to alleviate financial pressures to change forest land use, incentivize the expanded use of sustainable management practices on private lands, create jobs and stimulate economies in rural areas, and also to expand the ecosystem

services provided by forests nation wide. It is important however to recognize that these benefits can only be realized if Congress and the Federal Government allow forests to fully participate in these programs and markets.

Our current Administration stands poised to initiate clean energy and climate change programs that will define environmental policies on greenhouse gases for future generations. This opportunity can either result in increased opportunities to embrace forests and their benefits for the future, or create barriers to their contribution to the climate change problem. Much of the future for forests in the realm of climate change programs will lie in how policies for these programs are designed today.

Action Items for the Committee

1. Ensure a role for all forest offsets in Federal cap and trade

Numerous bills have been proposed on climate change over the past few years. Most recently the American Clean Energy and Security Act was approved by the House Energy and Commerce Committee. The Act, however, did not recognize domestic forestry offsets.

As legislation moves forward, attention must be paid to the role of terrestrial offsets from forestry projects. Forest offsets provide low cost, measurable, real carbon reductions to cap and trade systems. Forests provide these climate benefits with unequalled ancillary benefits such as clean water, biodiversity, and recreational opportunities--benefits not realized by any other offset type. Moreover, forests can provide these benefits now. Domestic offset projects allowed in any Federal cap and trade program must include opportunities for afforestation, reforestation, forest management, and harvested wood products (long-lived wood products). Further, the Federal Government must develop credible, accurate, and economically viable opportunities to recognize the important contribution forestry projects make to the climate change program.

2. Ensure that early actors in qualified voluntary programs are recognized

With the development of voluntary GHG reduction markets and programs in the US, has come an age of innovation, investment, and development for terrestrial offsets such as agriculture and forestry. Millions of tons of carbon dioxide have been sequestered in and traded from independently verified terrestrial offsets in the US and abroad. These early actors have not only led the way with early climate change actions, but they have developed innovative new technologies and processes to quantify, produce, and report carbon instruments in this new industry, to the benefit of all. Current language in the American Clean Energy and Security Act would significantly limit the recognition of these early actors.

3. Ensure that investments in offsets and clean technology continue

The American Clean Energy and Security Act includes provisions for a list of approved offsets to be developed at a later date by the Environmental Protection Agency (possibly out

as far as 2012). The impact of this provision will likely result in slowed or no investment in the offsets sector as developers and owners of offset projects wait to see if their actions will be recognized in the Federal program. The SAF encourages the Committee to push for a comprehensive listing (including forestry and agriculture) of approved offset types and programs as soon as is possible in order to maintain growth and investments in this industry.

4. **Encourage Woody Biomass Energy**

As the House Agriculture Committee is well aware, the definition of 'renewable biomass' in the Renewable Fuels Standard passed in the 2007 Energy Independence and Security Act must be corrected. This prescriptive, restrictive definition serves as a disincentive to restore forest health in many areas and only hampers efforts to reach renewable fuels mandates. The SAF recently submitted testimony with the House Agriculture Committee on this problem and that testimony is attached. Further, the most recent version of the American Clean Energy and Security Act includes a Renewable Energy Standard (RES) of which the definition of biomass is overly restrictive, especially on federal lands. Attached to this testimony is the SAF's most recent letter to the House Energy & Commerce Committee explaining the problems with the definition.

5. **Encourage existing and new markets**

Without markets, whether they're traditional or emerging, foresters cannot manage forest land. With the plethora of challenges facing domestic forests—wildfire, insects & disease, conversion, climate change—forests across the nation will need to be managed by professional foresters to conserve their many values and ensure they provide these values for future generations. Congress must be thoughtful about the laws it passes and must avoid perverse and unintended consequences.

6. **Restore Forest Health on Federal and Public Forests**

Our vast public forests, much like private forests, can be either a sink for CO2 or a source of CO2. The deplorable state of forest health on public forests, especially in the West, indicates that most of these lands will soon become of a source of CO2 through emissions from wildfires and decay. This problem also adversely affects wildlife habitat, water quality, aesthetic values and costs the Federal Government billions of dollars each year. The current law, regulations and case law governing federal forest management does not allow federal land managers to solve this problem. Congress must act to provide the authorities needed to appropriately deal with this problem.

Closing

I would like to thank the Committee and The Society of American Foresters for allowing me to share with you this information on our Nation's forests, its challenges, and opportunities for the future. It has been my extreme pleasure to be here with you today. I look forward to your questions and comments.