Testimony of

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"Management reforms to improve forest health and socioeconomic opportunities on the nation's forest system"

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Chair Murkowski, Ranking Member Cantwell, and Members of the Committee, thank you for the opportunity to testify on this issue of importance to all Americans – forest health and socioeconomic opportunities on the nation's forest system. In a world where our thoughts are often dominated by wars and rumors of wars, terrorists' threats and actions, and economic upheaval on the one hand and the daily challenges of just managing the lives of our families on the other, I want to express appreciation that you are addressing the importance of our nation's forests and especially those held in trust for all our citizens. The one-third of America blanketed by trees are vital to our nation's and our people's health, the quality of our environment, the robustness of our rural economies, and in many ways our security as a people and as a country.

Since the U.S. Endowment for Forestry and Communities (the Endowment) was chartered just over eight and one-half years ago, it has been my privilege and honor to serve as the organization's chief executive. I am a natural resources manager – both a forester and wildlife biologist – with nearly forty years of experience in the private sector, both industry and not-for-profits. My time with the Endowment has been among the most rewarding of my career.

Background about the Endowment

While all organizations are unique, we find few organizations with roots that compare to that of the Endowment. We are a not-for-profit, public charity chartered at the requests of the governments of the U.S. and Canada as a result of the Softwood Lumber Agreement of 2006. That long-running dispute over softwood lumber production and its export/import, in this instance, led to what we believe is the only time in the world when a not-for-profit was created and funded as part of a bi-lateral trade settlement.

The Endowment was granted a one-time \$200 million perpetual endowment with interest and earnings to be dedicated to sustainable management of forests in the U.S. and the economic vibrancy of the rural communities nested within or adjacent to those forests. We summarize our mission as a two-part one of conservation and economic development. We are dedicated to keeping working forests as forests and to advancing family-wage jobs in forest-rich communities. Upon our creation we instantly became the largest not-for-profit in America working at the national level dedicated to "ultimately support the North American forest industry." While we invest our funds and our work only in the U.S. we take the

"North American charge" very seriously and do all we can to extend our work to the health and integrity of the second largest expanse of forests on the planet – the combined forest estate of the U.S. and Canada.

How We Go about our Work

For us the "forest industry" means far more than just the production of traditional forest products. Thus, our vision is for America's forests to be sustainably managed to meet broad societal objectives including marketable products but also clean waters, wildlife habitats and other ecological services, all while ensuring healthy and vibrant forest-reliant communities. We have, therefore, set as our mission "Working collaboratively with partners in the public and private sectors to advance systemic, transformative and sustainable change for the health and vitality of the nation's working forests and forest-reliant communities."

We seek to advance our objectives by focusing on work in three areas: retention and restoration of healthy working forests; by promoting and capturing multiple value streams from those forests; and by enhancing community capacity, collaboration, and leadership. We often say that we go about our work by "doing what others can't or won't" – in short we seek the radical middle ground that advances multiple objectives by taking calculated risks to make significant positive advances.

As we approach our ninth full-year of operation we have only six full-time employees. Four of us are programmatic content experts. This lean staffing model is designed to ensure that we collaborate and cooperate with others in the public and private sectors. Too, our program officers are heavily invested not just in the oversight of our programmatic investments but also just as deeply in the content and advancement of that work. Thus, we are currently targeting our work to directly address four primary challenges: forest loss & fragmentation; forest health challenges; infrastructure, mill & job loss; and diminished investments in innovation.

Our all-volunteer thirteen-member Board of Directors meshes a diversity of skills and experiences in forest & forest industry leadership, rural poverty & economic development, academia, prior government service, and financial management to balance our goals as fiduciaries with missional objectives.

Challenges of Managing the Nation's Forested Estate

Many of our peers focus exclusively on either public or private forest issues. The Endowment takes a different approach. We focus on working forests – whether publicly or privately owned and managed. We work the great middle between statutory wilderness or private lands that are set aside from management on one hand and short-rotation woody agriculture on the other -- the space where forests, whether naturally regenerated or planted, serve the needs of society by providing a stream of traditional products and the wide range of ecological and societal services from water to wildlife and from recreation to mental health.

I will restrict my comments to two highly interconnected areas: forest health and watershed protection and the role of management in advancing both; and the need for a new research and development model to ensure that forests, forest products and all of the societal benefits of forests are available for future generations.

As author Eric Rutkow in his book *American Canopy* notes "...most of us share a sense that to destroy trees is to destroy part of ourselves. ... No other country was populated because of its trees quite like

the United States. Nowhere else has the culture been so intimately associated with wood." American is a nation of trees from the white pine forests of New England, to the diverse hardwood forests of Appalachia and from the longleaf pine savannahs of the southeast to the palms of Hawaii and the Douglas firs of the Pacific Northwest.

We are both the largest producer and the largest consumer of wood products. Wood frames the majority of our homes, paper is ever present in our lives in spite of the rise of electronics, and some of the most impressive features of this very chamber are the wood furnishings and paneling that grace the room. Remarkably after more than two centuries of development and more than 320 million people depending upon those forests, we today have about 70% of our original forest cover that still blankets fully one-third of our vast country. That's about the same amount we had a century ago when first we committed to scientific management of all forests and broader reserves of federal lands.

The public all-too-often believes that the lion's share of those forests is publicly-owned. We are indeed blessed by the foresight that today sees more than 4 of 10 acres in either direct public ownership or held in trust for Native Americans. Those forests, where they are available for management, provide only a modest share of the raw material for the nation's commodity needs. Yet, they are still vitally important to many rural communities for their economic impact and their example to everyday Americans that, through forest management, we can indeed have our cake and eat it too. With careful stewardship we can have forest outputs today and healthy forests and forest outputs for future generations.

Forest Service statistics suggest that as much as 16 to 34 million acres – an area the size of West Virginia or Wisconsin -- could be lost by 2060. Fortunately our challenge in public forests is not to avoid conversion; rather, it is to ensure that those forests are healthy and productive for current and future generations.

Whether the threat is unprecedented losses from the endemic mountain pine beetle that has resulted in devastation of tens of millions of acres across the U.S. inland west and western Canada, or the raging wildfires that have seen average annual losses more than triple just since 1980, our forest health challenges are real and growing.

Losses of the trees themselves are concern enough, but even greater losses follow in diminished productivity where excessively hot fires damage the soil and have long-term impacts on water infiltration and retention. Too, due to growing development in forested landscapes especially in the west, the need to protect people and structures is having a dramatic impact on the way we fight fires and the costs of doing so.

With more than 50% of the Forest Service's budget alone being required for fire prevention and suppression costs, we are not trending in a positive direction. If we are to extend the reach of highly stretched tax-payer dollars and breathe renewed life into many forest-reliant communities, we must find ways to meet forest health needs and the needs of their human neighbors at the same time.

• <u>The Importance of Active Management:</u> We do not advocate nor believe that a return to timber production as the overriding objective of public forests is desired or needed. However, we do believe that the nation's forests should play an important and appropriate role in providing timber for a range of commodity uses. This belief is founded on the reality that without management those

portions of our public forests allocated to multiple uses suffer unacceptable losses and costs to society both in terms of their economic as well as ecological benefits. Too, as my close friend Neil Sampson formerly of American Forests notes, "America's half-century love affair with the concept of wilderness is running headlong into the reality of climate change and the fact that we cannot preserve dynamic systems."

We do believe that the great re-start found in Stewardship Contracting is sound strategy worthy of permanent support. Stewardship harvests put the needs of the forest first – to ensure its health and productivity – with forest products benefits and the jobs associated as powerful benefits. Traditional timber sales still have a role in the Forest Service but the advantages of Stewardship Contracting including its more private sector philosophy of addressing multiple objectives in one contract improve economics and efficiency and the process itself better engages the communities impacted most by federal lands.

Gains come not just in jobs retained or created, but also are found in healthier, more fire resistant forests that are not as subject to catastrophic fires nor as prone to devastating watershed and wildlife habitat losses. Too, to the extent that Stewardship Contracting can substitute for work currently borne by taxpayers at the cost of from \$500 to \$20,000 per acre, we can extend the reach and benefits of forest restoration work without the need for massive taxpayer inputs while accruing rural economic and ecological benefits.

We believe that Stewardship Contracting has proven its value, but we need to consider the reality of the capital investments necessary to conduct that work. Current contract limits of not-more-than 10 years are good. But, significant capital investments required could be much better amortized with longer terms or at least an approach to simple extension without starting the process over.

• <u>Linking Forest Management to Community Resiliency</u>: For decades local communities were the primary beneficiaries of the jobs that accrued from timber-based harvests and the associated forest products manufacturing opportunities. While the pendulum swung too far in the favor of timber production to the disadvantage of other forest outputs, in recent decades it has likewise swung too far in the other direction to the demise of rural communities and the very ecological benefits that many forest protection advocates sought. Additionally, these decisions have yielded a significant drain on the Treasury in the form of costs associated with fire.

It is time to adapt the labor- and cost-intensive forest planning process designed to ensure that no public resource is at risk, to a risk-adjusted model that acknowledges that we must respond to the needs of forest resources and the rural communities nested within them at the speed of need. The current limitless planning and drawn-out appeals process serves no one other than the legal community and obstructionists. Our public forests, in a world of globalized trade and climate change, are too precious to be the pawns in standoffs that result in massive wildfires that destroy communities, forests, topsoil, wildlife habitat, and watersheds.

Recent moves to use collaborative engagement processes and to look for ways to reasonably truncate the NEPA process are promising, but far more needs to be done. Even with these advances

the time from planning to project implementation is far outside the reasonable scope to address forest health and restoration needs. We must find socially acceptable means to going from planning to action in timeframes that benefit both the forest ecosystems and people.

• <u>Viewing Water as a Forest Product</u>: Among the Endowment's seven primary initiatives is a portfolio of dedicated work to better link water consumers with water producers in mutually-beneficial relationships. Our desire to do this is predicated in the belief that water is perhaps the most precious and important of all forest products. For 2 of 3 Americans a forest is the source of their drinking water every day. And in nearly 1 of 2 cases that source is a public forest.

Again, we are speaking only about those forests designated for management. We cannot wait as the leaders and citizens of Denver were forced to do until a wildfire heavily damages the public forests and sends a \$150 million bill downstream to the water utility and consumers as a result. We must be proactive in making that linkage and in seeing that citizens, especially those who are most dependent and benefit directly from those watersheds are direct contributors to their management and protection. We do not place nearly enough value on water. We must do more to draw the link to the role forests play in producing our clean and safe water supply.

Going forward we must better understand, link, and manage our forests for the life-giving water that ensures community need and stability.

• <u>Finding New Ways to Enhance Forest Health while Generating Renewable Energy</u>: There is much in the press about the emergence of a new generation of wood-to-energy products from forests. Most of the attention is focused on the southeastern U.S. where entrepreneurs are responding to a European Union policy to move significant portions of its fossil fuel-generated power to renewable sources. While much of the EU policy has been focused on solar and wind, it has a component designed to either replace or extend the life of base load coal-fired facilities while substantially reducing their environmental footprint.

The Endowment is not an advocate for the development of industrial scale wood pellet production facilities that target the EU market. However, we do not share the concerns of many that these facilities are driving the loss and conversion of forests. Markets for sustainable forest products, regardless of the type of product, are incredibly important to retaining private forests as forests and could in some cases help offset the costs of necessary restoration work of public forests.

One can find a few localized markets where wood prices have increased for pulp, paper or oriented strand board users who are the traditional consumers of small diameter or low-value wood that comprises a significant component of any forest stand. That said, we believe that this market competition actually serves a greater overall purpose as a near-term market incentive primarily for family forest owners who, but for those markets, would not have tools nor be willing to invest funds from their checkbooks to upgrade the quality of their forests or even to keep their forests as forests.

We do not discount legitimate debates about carbon policy or the need to protect waterways, special conservation sites, or other ecological values. However, we do believe that the tenor of the

debate and the broad brush attack on uses of wood to produce energy and energy-products, misses the point on the bulk of the nation's forests where such markets will likely serve to keep private forests as forests and could significantly supplant the taxpayer need to subsidize or support the entire cost of forest restoration on public lands.

In short, we believe that community-scale markets for low-value wood, whether those come in the form of conversion of residential or commercial heated facilities to wood, could have a significant benefit to forest health on one hand, and great economic benefit to the community on the other through job creation and the retention of energy dollars within a community. In rural communities where every dollar is precious, use of locally-produced energy sees more than 75% of energy dollars stay and revolve within the community; whereas, 75% of dollars spent on non-local energy flow out of the community.

In the public lands setting we anticipate and are investing in research and development to evaluate our belief that the most compatible markets that would enhance forest health, job retention and overall environmental quality will likely come in the form of dispersed facilities near or within the forest. We think one of the best options may be to produce torrefied wood for co-fueling in coal-fired utilities or perhaps the production of biochar as a soil amendment and/or water filtration material.

We strongly urge support for collaborative efforts like the Consortium for Advanced Wood-to-Energy Solutions being led by the Endowment with our partners at the Forest Service. Such marketbased initiatives offer great hope to concurrently address a wide range of societal needs – job creation, domestic green energy production, forest restoration and protection of watersheds and wildlife habitat.

Now let me turn attention to the need for a new model to support and advance research and development for forest management and forest products of the future.

<u>The Need for a New Public/Private R&D Partnership:</u> The U.S. has a long and exemplary history in public/private partnerships to advance sectors of importance to our society both in terms of job creation and protection of public resources. In decades past the linkage between the USDA Forest Service and even the Department of Energy and the forest industry were strong and two-way. Today, as a result of thinning margins in the industry sector, disintegration that has seen fully integrated companies reform along product lines, and perhaps a belief that the forest sector is a mature and/or sunset industry, have all conspired to undermine cooperation and collaboration and investments in innovation. That demise is further driven by the decline of public forests as a meaningful contributor of timber for industrial uses at the national level.

At the same time, our neighbors in Canada and our competitors in Scandinavia and Japan have found ways to deepen public/private collaboration to generate more value from both public and private forests and to invest in the next generation of green products. In fact, those countries that like the U.S. were built on wood and wood products are taking a "back-to-the-future" approach to investment in forest products to ensure that the magnificent factory that is the tree will be building blocks for the future. We see it already in the EU where a new generation of wood-based buildings are using cross-laminated timbers – what you might think of as plywood on steroids – yielding a more carbon- and energy-efficient structure that can be built more cheaply while exhibiting the best that forests have to offer – natural beauty that we keep trying to mimic with laminates and faux designs.

At the same time the Canadians, Scandinavians, and the Japanese are investing heavily in woody cellulosic nanotechnology. Canada has done what might be unthinkable in the U.S. via the creation of FPInnovations. There three private research institutes for forests, solid wood products, and pulp and paper have been merged with a significant part of the federal and provincial forest research capacity to create a global powerhouse for innovation.

Sadly in the U.S. combined public and private investment in forest and forest products R&D is at an all-time low of about ½ of 1% of sales. Our nearest competitors in Canada are investing similar amounts on solid wood products as are we, but six fold as much for paper and advanced products. Too, our federal R&D workhorse at the Forest Service is slowly but surely reducing funding for forest products research such as that carried out by the Forest Products Laboratory in Madison, Wisconsin and that of regional research stations. While there have been important investments in the vital Forest Inventory and Analysis program which are a foundational component of the national R&D program, and we thank the Congress for those investments, the rest of R&D is in serious decline.

The Endowment is considering the creation of a nation-wide forest and forest products Blue Ribbon Panel to examine these trends and propose new models that are appropriate for the U.S. and that can be sustained going forward. In the meantime, we are strong supporters of the current USFS R&D and Forest Products Laboratory budgets with the caveat that they must be reviewed and reconfigured to meet current and future needs. Too, we believe the proposal to create a National Network Manufacturing Initiative that would focus on nanotechnology, with what we would hope would be a significant component dedicated to woody cellulosic materials, would be a sound investment in the nation's future.

Final Thoughts

Let me conclude by noting that all of the issues we highlighted above are predicated on the belief that America will need to migrate to a rational carbon policy that if not to address climate change directly, should be based on the importance of local job creation that uses widely available, renewable and sustainable products like those that come from forests. To move "back to that future" we must ensure that our public forests are healthy and that they are managed to meet the full range of societal needs – water, wildlife habitat, recreation & re-creation, and carbon-friendly products of the future. We believe that the best and most resilient models to support such are those founded on true public/private partnerships and where the benefits accrue as America's first forester, Gifford Pinchot, said "for the greatest good of the greatest number for the longest time."

A Sampling of the Endowment's Programmatic Investments to Date

The Endowment currently targets our work through investments and activities in seven initiatives. The following shares at least one example of the types of work and some of the successes in each.

<u>Traditional Markets:</u> Sawmills and pulp and paper manufacturing facilities are foundational to the forest products industry that accounts for approximately 4 percent of the total U.S. manufacturing GDP, manufactures approximately \$210 billion in products annually, and employs nearly 900,000 men and women. The industry meets a payroll of approximately \$50 billion annually and is among the top 10 manufacturing sector employers in 47 states.

Yet, it is an industry undergoing great change. Just since 1990, more than 40% of the pulp and paper mills – typically the highest wage manufacturing jobs in their rural communities-- have been shuttered. To ensure that this sector that is so vital to our economy, and that the green products that it produces to meet societal needs, remain a robust part of our economy going forward, the Endowment made a significant investment in studying and promoting the use of USDA Research and Promotion Programs for the greater forest products sector.

The Endowment's investments and collaboration with several segments of the forest products industry have led to the first-ever commodity check-off programs for forest products at the national and international level.

- In 2011 the global softwood lumber industry that either manufacturers within or export to the U.S. voted overwhelmingly to adopt a commodity check-off. Through 2014 that program has generated \$36 million to grow the market pie for sustainably produced softwood lumber products.
- In late 2013 the paper and paper-based packaging segment of the industry followed suit with its own check-off also with Endowment support. In 2014 that program generated \$20 million and expects to collect \$25 million in 2015 to promote the benefits and uses of paper and paper-based packaging.
- The Endowment is now collaborating with two others Hardwood Lumber & Hardwood Plywood and Wood-to-Energy for possible check-offs to aid their segments of the sector.

The importance of these advances cannot be overstated. But for the Endowment's leadership and investments in these programs, this vital sector that is so critical to our economy, our society and the environment would likely continue to contract.

<u>Non-Traditional Markets</u>: As vitally important as lumber and paper products are to our modern society, perhaps the most important forest product is water. The Endowment is working with the USDA Forest Service and Natural Resources Conservation Service (NRCS) and with communities, utilities, and conservation organizations across the country to make the vital link between healthy forests and water quality and quantity. In fact, 2 of 3 Americans get their drinking water from a forest every day. Without forests to help regulate flows and to enhance water quality through natural filtration, we are left only with prohibitively expensive gray infrastructure as an option. Studies show that when we combine gray and green infrastructure we get the best of both but at costs far less than a gray-only approach.

To date our best example of success has been an investment that we and NRCS made with the City of Raleigh whereby the City adopted a base rate increase for all water customers to address protection of the forested watershed that yields the city's water. That modest program that costs an average

homeowner 40 cents/month generates between \$1.5-2 million/year to ensure that the private forestland owners who comprise the watershed are incented to keep their forests as forests. In a world with a growing population and where climate change is altering historic weather patterns, many predict that water will be "the" world's greatest natural resource challenge of the 21st Century. To the extent that we can link water producers (forest landowners and managers) with downstream water consumers in a mutually-beneficial relationship, we have great hope that we can address this challenge.

<u>Wood-to-Energy:</u> Among the greatest challenges facing private as well as public landowners and managers is what to do with burgeoning quantities of small-diameter, or low-value dead or dying wood. The plethora of mega fires that we've seen in the West in recent years driven by a combination of unnaturally dense stands, a massive mountain pine beetle kill, historic droughts, and climate change, serve as exhibit A. Even in areas that had traditionally robust markets, the loss of more than 40% of the nation's pulp and paper mills just since 1990, are now feeling the effects of diminishing markets.

While far from the full answer to America's energy problems, advanced uses for wood-to-energy hold hope not only for outlets for this material but also offer the added benefit of community-scale economic development to offset the general decline all-too-common in many of the nation's rural forest-rich communities. For most of our years as an organization we have partnered with and extended the reach of the USDA Forest Service to target market-based solutions to these challenges.

The Great Recession and the more recent emergence of cheap natural gas and the near-collapse of oil prices have combined to make this work even more difficult. That said, we believe that going forward local, regional and national markets perhaps in the form of torrefied (roasted) wood that is densified can be an option to extend the life of the nation's investment in coal-fired electricity generation while dramatically lessening the environmental downsides of coal all while enhancing the health and vitality of the nation's forests.

Through the creation of the Consortium for Advanced Wood-to-Energy Solutions, we have doubleddown to prove and open commercial markets for torrefied wood or to prove once and for all that this outlet does not hold the promise we need. Over the next 24 months, the Endowment and our partners at the Forest Service and a number of private companies and universities, expect to see great advances that -- if successful -- could serve as an economic pull for restoration forestry that is now being conducted almost exclusively at a direct cost to the American taxpayer.

<u>Innovation</u>: Traditional forest products from the wood we use to build our homes to the packaging used to ship our latest treasure from Amazon.com have been with us for many decades. Yet, they remain among the greenest of products available for society. Those products come from a renewable forest that provides a multitude of other societal benefits beyond the tangible products we buy or use daily. In a world that likely will be increasingly driven by the specter of climate change and the need to better account for the carbon impacts of our actions, those same products hold great promise as the products of the 21st Century and beyond. But, if that is to be so we must invest more in Research and Development (R&D) both of the forests that provides the raw materials and in the products that can meet societal needs going forward.

A traditional bastion of innovation, the broader forest sector has clearly lagged in recent years in R&D investments. In a nation founded on innovation and where even the most basic of manufacturing sectors invests an average of 3.4% in R&D, the broader forestry and forest products sector is falling

behind. Pre-recession the sector invested an average of ½ of 1 percent of sales in R&D while our neighbors to the North consider forest and forest products R&D a national priority.

If we are to claim even a portion of the "green" potential of forest products in the future and at the same time keep our public forests healthy and our private forests as forests, we must change course. The Endowment is hoping to stimulate a new model where the public and private sectors collaborate to create a brighter future. Our flagship investment can be found in another partnership with the USDA Forest Service through our Public/Private Partnership for Advanced Woody Biomaterials and Nanotechnology – what we call P³Nano.

Our objective is to rapidly advance commercialization of green products at the nano-cellulosic scale – whether that comes in new materials for the automotive or aerospace sectors or more sustainable building products – all while ensuring the environmental health and safety of those products and growing the next wave of family-wage jobs from abundant low-value wood.

<u>Asset Creation:</u> With an overall target to keep forests as forests and advance family-wage jobs in rural forest-rich communities, we are sensitive to the need to pay particular attention to disadvantage populations, especially people of color. With NRCS and the Forest Service our foundational program in this space seeks to ensure that African American forest landowners are able to retain their forests and use that asset to create and expand family wealth and opportunity. We are working in three southern states to find new ways to link those landowners to the programs and services that will ensure inclusivity and access to programs that have traditionally benefited Caucasian landowners. We are completing the first two years of pilot work that offers significant evidence that this important work will help landowners clear title and turn an otherwise non-productive asset into a benefit for current and future generations. Too, as broader society becomes increasingly pluralistic, we believe that this work will help bring the voice and needs of people of color to the forest conservation and community-scale economic agenda.

<u>Forest Health</u>: We live in a world where global trade and travel are givens. Unfortunately that very openness that serves to shrink the world is also all-too-often accompanied by unintended consequences. The challenge of exotic pests and diseases often exacerbated by climate change has moved from an occasional threat to one that appears almost weekly.

The Endowment has chosen to address these complex challenges on two fronts: first, by plumbing the potential of modern biotechnology as a response mechanism to address forest health challenges in a much more rapid and cost-effective manner. Again, with the USDA Forest Service as a primary partner, we created the Forest Health Initiative that with the direct input of several university and conservation group partners – The Nature Conservancy and Environmental Defense Fund among them –amassed some \$7 million in public and private funds to use the American chestnut as a test organism. These funds, which represent a minimum of a dollar-for-dollar match of private to public funds, have come over a period of five years and have yielded extraordinary results.

Our work differs greatly from most such work in that the critical science-based lab and field work is done openly where federal regulators (EPA, FDA, and USDA APHIS) and nearly three-dozen conservation and corporate interests are engaged concurrently. In short, we seek to determine if, when and how, genetic tools could and might be used to address forest health challenges. The work has already succeeded on a number of scientific fronts as our collaborators have pioneered technologies to dramatically shorten

timeframes from decades to as few as three years to generate disease resistant seedlings that can be tested against a range of economic, ecological and societal hurdles. Perhaps even more importantly the initiative serves as an open forum where people and organizations bound by a love of forests can connect to discuss advanced tools to keep trees and forests healthy.

We've augmented our targeted work through the Forest Health Initiative to encourage others to take a more holistic look at forest health at the continental level. Hearkening to our roots in the Softwood Lumber Agreement between Canada and the U.S., we have been the convener of two bi-lateral Forest Health Summits where government, researchers, and industry from both sides of the border are taking cross-border looks to be more strategic in collaboration for the health of the forests that span both sides of the border that unites us. From cooperative ventures to better coordinated response to mega fires and targeted research to avoid duplication and more rapidly advance responses to common forest health challenges, this work is identifying new ways to use limited financial and human resources to address growing numbers of forest health challenges common to the people and forests of both nations.

<u>Forest Retention</u>: The Endowment is "forest-centric." Everything we do starts with the view of how we can retain forests as an important land use that also provides economic and environmental benefits to their owners, managers and communities. We do not use our limited financial resources to buy lands or conservation easements; rather, we have developed collaborative efforts to more strategically direct the resources of others to have greater benefit or to catalyze new sustained revenue streams that can and will support work well into the future.

Two projects under our Forest Retention Initiative showcase our work in this space: creation of the National Conservation Easement Database (NCED) and our work with the Department of Defense.

The Endowment created NCED through grants that brought together five major conservation partners – Trust for Public Land; Defenders of Wildlife; NatureServe; Conservation Biology Institute; and Ducks Unlimited – to create a cost-effective, user friendly way to track not only working forest conservation easements but land conservation easements of all types. Today, NCED is the most complete source of conservation easements held by public agencies and private land trusts, boasting more than 20 million acres and 100,000+ easements. As it has grown, we have attracted the support and engagement of key federal and state partners as well as the greater land trust community all with an objective to democratize and make more readily available critical information about non-fee areas for land conservation and compatible economic uses.

With the Department of Defense we are working to protect the vast number of military bases that were established in rural areas, but where encroaching development is threatening training exercises and weapons testing. Working forests buffer operations from residential areas and create dark skies for night air maneuvers. Forests also provide a refuge for wildlife, relieving commanders of obligations to reserve habitat for imperiled species that would otherwise find refuge on bases.

For a more detailed listing of the Endowment's programmatic work to date, visit our website at <u>www.usendowment.org</u>