

# CANADA/U.S. FOREST HEALTH SUMMIT



One Continent; One Forest; One Threat:  
*Report and Recommendations*

# Canada/U.S. Forest Health Summit

## ONE CONTINENT; ONE FOREST; ONE THREAT: REPORT AND RECOMMENDATIONS

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This report was developed by the U.S. Endowment for Forestry and Communities on behalf of the USDA Forest Service and the Canadian Forest Service of Natural Resources Canada

**U.S. Endowment for Forestry and Communities**

[www.usendowment.org](http://www.usendowment.org)

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## EXECUTIVE SUMMARY

**The What:** The USDA Forest Service (USFS) and the Canadian Forest Service (CFS) of Natural Resources Canada hosted an invitation-only “summit” on June 28, 2012, to examine ways to enhance cross-border collaboration and improve response to the continent’s forest health crises. The day-long event hosted at the Embassy of Canada in Washington, DC, was convened by the U.S. Endowment for Forestry and Communities (the Endowment).

Key leaders with an interest and a role to play in the future of North American rural and urban forests were assembled to establish a vision that will build on past and continuing collaboration between the two countries. The Summit is viewed as a first step in establishing a strategic direction with the details for implementation to be developed subsequently by scientists and other key leaders from the respective organizations and other interested stakeholders. Two-dozen high-level government, non-profit and private sector officials with roles and responsibilities that converge around forests participated.

**The Why:** We inhabit a continent with rich and diverse forests. They are the source of the greenest of building products, life-giving water, abundant fish and wildlife, recreation that leads to spiritual re-creation, and so much more. If we cannot sustain those forests in healthy and productive condition, what we will lose is irreplaceable

The mountain pine beetle, a native forest pest, has seriously impacted forest stands across the western half of the continent. Disturbances of this type occur independent of sovereign borders and generate tens of billions of dollars in direct losses and community and societal disruptions in the long-term. The exotic Emerald Ash Borer (EAB) identified just over a decade ago near Detroit, MI, and Windsor, ON, has in short order eliminated millions of ash trees from urban, suburban, and native forests. The costs and losses that will be generated over the next 10 years by this single pest have been estimated – without accounting for environmental impacts – at \$2 billion (US) per year. These costs will be borne by municipalities, property owners, nursery operators, and forest products companies. The reality is that mountain pine beetle and EAB are just two examples of a growing list of threats to North America’s forests.

**One Continent; One Forest; One Threat:** This satellite image showing North America’s forests without any geo-political boundaries served as backdrop for the entire Summit.

In reporting the intent of convening the group, USDA Secretary of Agriculture Tom Vilsack noted, “The borders that separate the United States and Canada don’t segregate threats to our natural resources. The countries share common environmental concerns. It is critical that we continue to collaborate and address current and future land management challenges as partners.”

Canada’s Minister of Natural Resources, Joe Oliver, highlighted that “by identifying issues we can work on together, we aim to maximize the value of the critical work that scientists and researchers are doing on both sides of the border to ensure the health of our forests and forest sector.”



**The How:** Participants in the Canada/U.S. Forest Health Summit agree that foundationally:

- The forests of the two countries are among the most important and valuable natural assets in the world;
- Insects, diseases and pests – whether endemic or exotic – move irrespective of political boundaries;
- The changing climate as evidenced by warming temperatures and longer freeze-free periods exacerbated by longer periods of drought is resulting in levels of forest loss and associated wildfires that far exceed the norm for the past several decades;
- The challenges are of such magnitude and the speed of change is occurring at such a pace as to overwhelm traditional methods of detection and response; and,
- Canada and the U.S., as well as our rich forests and our collective citizens will be well served by a more open, collaborative, shared holistic approach to the situation.

Therefore, the respective leaders from the public and private sectors assembled agree that:

- Past collaboration between and among our scientists and organizations provides a sound footing upon which to build a more strategic and holistic plan using the expertise and resources of respective organizations to respond to the continent's burgeoning forest health challenges "at the speed of need";
- Such response will be further fleshed out with specific plans and actions that start with perhaps a single issue or species to help establish a model for broader application;
- Sound information that is readily available to all who need it is vital to success;
- We must, using this sound data, establish early detection and responses to limit the number of issues that rise to the level of continental threat;
- Such work will be founded on a systems approach with a commitment to reduce duplication by increasing collaboration and taking advantage of differing capabilities, skills, and talents to segment problems to speed learning and response;
- We will include funders, performers, and users of scientific information in planning;
- We will, to the maximum extent practicable, seek to develop a "one plan; one voice" approach that is committed to persistence and clear prioritization of need;
- We will use a common sense of urgency;
- We will acknowledge the importance of applying adaptive management approaches that recognize we must learn by and while doing thereby adjusting as we learn; and
- We must draw lessons from the human health sector in focusing on prevention versus treatment.

## OVERVIEW

The USDA Forest Service (USFS) and the Canadian Forest Service (CFS) of Natural Resources Canada hosted an invitation-only “summit” on June 28, 2012, to examine ways to enhance cross-border collaboration and improve response to the continent’s forest health crises. The day-long event hosted at the Embassy of Canada in Washington, DC, was convened by the U.S. Endowment for Forestry and Communities (the Endowment).

Key leaders with an interest and a role to play in the future of North American rural and urban forests were assembled to establish a vision that will build on past and continuing collaboration between the two countries. The Summit is viewed as a first step in establishing a strategic direction with the details for implementation to be developed subsequently by scientists and other key leaders from the respective organizations and other interested stakeholders. Two-dozen high-level federal and private sector officials with roles and responsibilities that converge around forests participated.

## Context

Canada and the U.S. have a long and successful history of collaborating on varied natural resources and resource-related issues. Much of this work has occurred at the individual researcher or project level. In an era of increasingly complex threats that span the continent and the globe and in a time of growing resource limitation (human and financial), it is critical that we use this foundation of collaboration to build effective, efficient, and results-oriented models that can better address current challenges, employing what has been called “science at the speed of need.”

## One Continent; One Forest; One Threat

For example, the mountain pine beetle, a native forest pest, has seriously impacted forest stands across the western half of the continent. Disturbances of this type occur without respect for sovereign borders and generate tens of billions of dollars in direct losses and community and societal disruptions in the long-term. The exotic Emerald Ash Borer (EAB) identified just over a decade ago near Detroit, MI, and Windsor, ON, has in short order eliminated millions of ash trees from urban, suburban, and native forests. The costs and losses that will be generated over the next 10 years by this single pest have been estimated – without accounting for environmental impacts – at \$2 billion (US) per year. These costs will be borne by municipalities, property owners, nursery operators, and forest products companies. The reality is that mountain pine beetle and EAB are just two examples of a growing list of threats to North America’s forests.

## Additional Examples of Insect and Pathogen Affecting North American Forests

Insects		Pathogens	
Native	Non-Native	Native	Non-Native
<ul style="list-style-type: none"> <li>• Douglas-fir Tussock Moth</li> <li>• Southern Pine Beetle</li> <li>• Eastern Spruce Budworm</li> <li>• Western Spruce Budworm</li> </ul>	<ul style="list-style-type: none"> <li>• Asian Longhorned Beetle</li> <li>• Browntail Moth</li> <li>• European Gypsy Moth</li> <li>• Asian Gypsy Moth</li> <li>• Hemlock Woolly Adelgid</li> <li>• Nun Moth</li> <li>• Sirex Woodwasp</li> <li>• Gold Spotted Oak Borer</li> <li>• Mediterranean Pine Engraver</li> <li>• Walnut Twig Beetle</li> <li>• Redbay Ambrosia Beetle</li> <li>• Spruce Aphid</li> </ul>	<ul style="list-style-type: none"> <li>• Dwarf Mistletoe</li> <li>• Root diseases</li> <li>• Fusiform Rust</li> </ul>	<ul style="list-style-type: none"> <li>• Chestnut blight</li> <li>• Sudden Oak Death*</li> <li>• White Pine Blister Rust</li> <li>• Oak Wilt</li> <li>• Butternut Canker Disease</li> <li>• Dutch Elm Disease</li> <li>• Thousand Canker Disease</li> <li>• Laurel Wilt</li> <li>• Beech Bark Disease</li> </ul> <p style="text-align: right;"><i>*Assumed non-native</i></p>

New threats are appearing with increasing frequency. New technologies – genomics and genetic studies – are offering the potential for enhanced prevention, detection, and treatment.

**Movement of Goods: Threat and Opportunity**

Native and introduced pests have impact on this continent and abroad. Native pests disrupt domestic fiber supply and transform exports into a potential source of risk, threatening the forest estate of this continent and beyond. Maintaining access to export markets is key to the long term success of the North American forest sector. All acknowledged that an enhanced understanding of these risks and opportunities would serve all well.

**The Challenge: A Summit to Set a Vision and Course of Action**

Understanding that climate change is compounding our need for timely and cost-effective tools to respond to increasing risks of pests, diseases, and pollutants, the CFS and USFS sought participation in the exploration and development of a cooperative vision, and a plan for shared specific actions that could help meet the forest health challenges facing both nations.

**Key Learnings**

In her opening comments, Dr. Ann Bartuska, Deputy Under Secretary, USDA Research, Education, and Economics, reminded all of the importance of historical information to predict future events. As participants gathered in Washington, DC some of the largest wildfires at this early stage of the season raged in Colorado, Idaho, Montana, Utah, and, Wyoming. Forest scientists and forest health professionals, using data sets collected through the annual forest pest surveys and integrated with the FIA<sup>1</sup> program information forecasted massive insect outbreaks and wildfires exacerbated by un-naturally thick stand conditions that many suspect are driven by a changing climate.

In setting the context in Canada, Mr. Tom Rosser, Assistant Deputy Minister, CFS, set forth the challenge for organizational leaders to establish a common set of strategic goals to guide science investments. Pointing to the mountain pine beetle and emerald ash borer examples, he noted that solutions for such complex problems are beyond the capacity of individual organizations and thus called for effective priority setting and collaboration.

If we are to successfully address growing needs and demands in a time of diminishing financial and human resources, it is imperative that we engage all interests in new collaboratives and models. Single examples from each country highlighted the potential to work differently to yield greater results:

- In the U.S., the Forest Health Initiative, a broad-based program to plumb the potential of modern biotechnology to address burgeoning forest health challenges is using a braided approach to work the science, social, environmental, and regulatory dimensions concurrently. Using a leverage funding model and taking a holistic approach to the issue “at the speed of need” is leading to concrete results to address a complex problem with a short timeline
- While most forest research organizations – whether seeking basic science or new product innovations – might best be described as fragmented, uncoordinated, and under-funded, the forest sector in Canada has accomplished an unprecedented model that revolves around a singular vision. FPInnovations, at just five years young, was created as a merger of three independent forest products research organizations – Forintek, Paprican, and Feric – along with the Canadian Wood Fibre Centre of CFS. FPInnovations has been a catalyst in creating an innovation hub for the forest sector, involving the industry, governments, universities, suppliers, and its own innovation capacity.

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<sup>1</sup> The National Forest Inventory and Analysis Program (FIA) of the USDA Forest Service has been in continuous operation since 1930 yielding a continuously updated comprehensive nationwide inventory and analysis of the status and trends of America's forest resources. Information collected and analyzed under this Program are the primary source of ecological data on the conservation and sustainable management of forests across all ownerships in the United States.

## BACKGROUND

### Process and Motivation

More than one-third of the total land area of Canada and the U.S. is blanketed with forests. The two countries share many ecologic, socio-economic and other commonalities, and have similar needs with regard to forest science and forest products research. Historically the two countries have benefitted greatly from pooling their expertise on selected issues. There is now a growing imperative for shared benefit in light of more complex challenges in and around our forests, as well as comparatively fewer resources to deal with them.

In December 2011, the heads of the U.S. and Canadian Forest Services' requested their staff to work together to identify a small package of opportunities to enhance bilateral collaboration in a way that would add value and be both strategic and cost-effective. Just a preliminary review and enumeration of existing initiatives revealed that, broadly speaking, pests, climate change, and fire management dominate an already extensive field of active bilateral collaboration. Additional work also falls in the area of mapping and spatial-analysis given the geographic link between Canada and the U.S. Outside of the basic science arena, there is notable collaboration in the area of forest products research.

Overall, however, it is clear that the nature of collaboration is varied and indicative of a range of drivers such as historic links, geographic proximity and professional interests. Much appears to be supply driven – **we do it because we can** – rather than demand driven – **we do it because we need to or should**. The objective of this summit is to engage more strategically on a bilateral basis taking into account existing collaboration to advance to a more strategic and result-oriented path that would benefit the forests and peoples of both countries.

As the two federal authorities with lead responsibility for forests and forestry at their respective national levels across our two countries, the Forest Services' understand that they are not the only public or private interests with a stake in this topic. Therefore, we are seeking to gather top leaders from each of the primary public and private entities with a respective national scope and vision, to determine if the time is right to take a more holistic look at threats, opportunities, and benefits to a more strategic and coordinated approach to forest issues at the continental level. While we know that there are many areas of interest and engagement, we have chosen as a starting point to limit this initial survey and plan to those topics directly related to forest health.

### One Continent; One Forest; One Threat

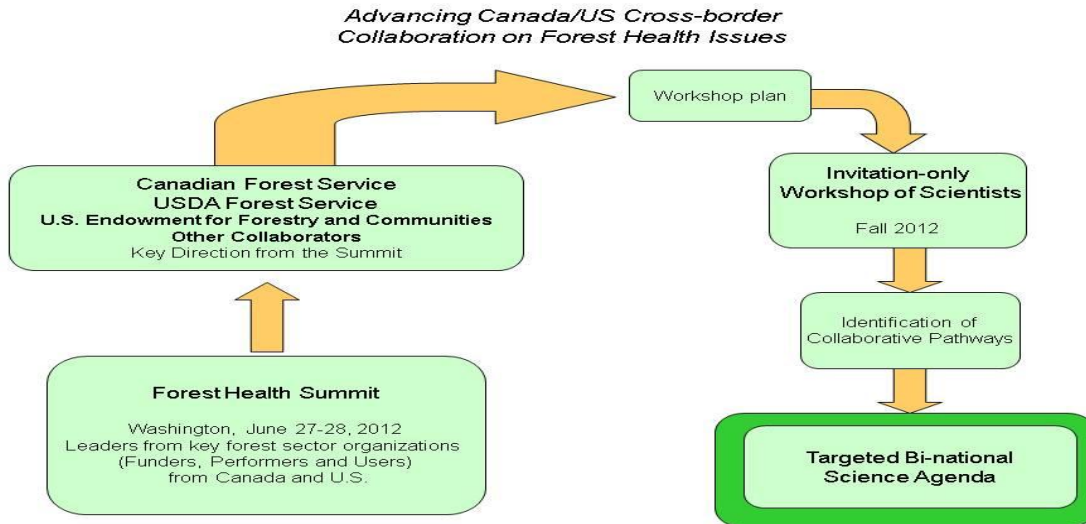
One Continent: Canada and the U.S. not only share the world's longest border of any two nations, but with daily crossings of 400,000 people and \$1.4 B in trade, our countries are the world's largest trading partners as well.

One Forest: While we share a continent, perhaps no feature symbolizes our common bond more than our forests. Ranked third and fourth respectively in total forest area globally, when combined the forest area of the two countries is exceeded only by that of Russia. Our peoples – and those of the entire world -- enjoy the bounty of those forests and their many benefits from clean air, fresh water, diverse wildlife and fish, places of recreation and natural beauty, to the greenest of all building products.

One Threat: Statistics are difficult to quickly combine, but perhaps the U.S. National Report on Sustainable Forests- 2010, serves as an indicator. That report finds that levels of forest disturbance are rising, including a three-fold increase in insect-induced mortality relative to the previous report less than a decade earlier. For instance, the cumulative area of just those forests in British Columbia affected to some degree by the mountain pine beetle is estimated at 47 million acres (19 million hectares). Similarly, an area of almost equal size at 44.8 million acres (18.1 million hectares) has been impacted across the western U.S.



**Proposed Pathway**



**Planned Invitees**

While the intent of the Summit was to be open and inclusive, in the near-term the sponsoring organizations felt that it was best to begin with a smaller group of organizations and individuals who could review, consider, and set the strategic direction for the effort. In doing so participation was limited to those organizations – both public and private – that not only have a key stake in the health of the continent’s forests, but also who have a national or global perspective and are recognized by their peers and others as having a significant role to play in protection and management of each nation’s forests respectively.

**Desired Outcome**

To identify forest health challenges that are of strategic importance to the North American forest sector that would benefit from enhanced bilateral engagement and collaboration.



## PROCESS

The Summit was short on presentation and high on engagement and discussion. **Carlton Owen**, President & CEO of the U.S. Endowment for Forestry and Communities, provided an opening and challenge. (To view his remarks visit -- <http://www.usendowmentblog.blogspot.com/> ).

**Dr. Ann Bartuska**, Deputy Under Secretary for USDA Research, Education, and Economics, stood in for USFS Chief **Tom Tidwell** who had been dispatched to Colorado to accompany President Obama in a review of the losses associated with the devastating wildfires and with **Tom Rosser**, Assistant Deputy Minister, CFS, provided context.

The engagement segments of the meeting were broken into three discussion groups with participation being rotated in each of five “discussion rounds.” Participants addressed the following:

- Round I: Identify success stories of process or programs that are working exceptionally well within your respective organization and identify key concepts that would benefit others.
- Round II: Identify ways that each organization is addressing a rapidly changing environment where diminishing resources and growing expectations/increasing demands are the norm.
- Round III: In 10 years, how will your operating world look if we started doing things differently? (What would you stop doing and what would be the impact?)
- Round IV: Using an “appreciative inquiry” process, based on what’s working well in your organization now, how would we move these lessons/concepts forward to address the continent’s forest health problems?
- Round V: Get very specific about directions you wish to see advanced to address forest health with the understanding that a follow-up session of scientists may be tasked to help define the specific approaches and implementation plans.

Between discussions rounds III and IV, **Dr. Jim Reaves**, Deputy Chief, Research & Development, USFS, and **Mary Mes-Hartree**, Director General, Science Program Branch, CFS, provided an illustrative example of an innovative advance within their respective sectors (See pull outs on Pages X & Y)

**Jacques Gagnon**, Director, Innovation and Integration, Science and Programs Branch, CFS, and **Dr. Deanna J. Stouder**, Associate Deputy Chief, Research & Development, USFS, facilitated a final plenary designed to draw key learnings and strategies from the final session.

**Tom Rosser** then provided final thoughts and **Carlton Owen** concluded the proceedings.

## KEY LEARNINGS – PLENARY SESSIONS

Among single words that participants used to describe the Summit included “opportunity,” “excitement,” and “hope.” Although we did not record the session in any form, other than notes, three specific stories seem worth capturing and sharing.

### Using Historic Data to Predict Future Events

In her opening challenge, Dr. Ann Bartuska, reminded all of the importance of historical information to predict future events. As participants gathered in Washington, DC some of the largest wildfires at this early stage of the season raged in Colorado, Idaho, Montana, Utah, and Wyoming. Forest scientists and forest health professionals, using data sets collected through the annual forest pest surveys and integrated with FIA program information had made predictions of massive insect outbreaks followed by massive wildfires resulting from those conditions.

### Collaboration, Modern Science, Funding and a Singular Focus: Science at the Speed of Need

A collaborative effort to advance the countries’ understanding and role of biotechnology to some of today’s most pressing forest health challenges. The Forest Health Initiative (FHI) – a collaborative funded by the USFS, Duke Energy, and the U.S. Endowment for Forestry and Communities –initially focused on an icon of Eastern forests, the American chestnut, as the test tree as a pathway to explore new approaches to enhance the health and vitality of other trees, forests, and forest ecosystems. FHI used a holistic approach to address emerging forest health threats by assessing not just the science but the societal and regulatory issues concurrently.

Among the advances that Dr. Jim Reaves shared as foundational to success in FHI were:

- When scientists proposed a 20-year timeframe to achieve the goal of a “plantable disease resistant” tree using cysgenic (related tree genes – Chinese chestnut and American chestnut), the visionaries of FHI said, “Do it in three.” When the scientists agreed that it might be done in “twelve to fifteen,” the sponsors responded, “three.” Finally, with a good margin of skepticism, the scientists agreed that the goal would indeed be three years.
- The program amassed essentially all of the funds necessary to achieve the objective -- \$7 to \$10million – and without using the traditional request for proposals (RFP) approach, recruited the range of universities, agencies and non-profits that when taken together, could work the entire project value chain concurrently rather than sequentially.
- The program would be operated in a “fish bowl” with scientists, social & environmental interests, and regulators having access to all of the information at the same time. The program would be directed by a Steering Committee led by the three funding sponsors along with representatives of broader social interests (The Nature Conservancy and Environmental Defense Fund) and an independent scientist.
- The science program would be coordinated and reviewed by an independent Science Chair with undisputed credentials and credibility but without the benefit or access to any of the program funding for his own institution.
- All work was founded on a commitment to let the science and facts drive the process and not to cross the bridge to unregulated dispersal in the natural environment unless the information supported that such could be done with a good margin and assurance of environmental and human safety.

### Breaking Down Barriers and Building New Structural Models to Support Sound Data: FPIInnovations

On the issue of alignment and synergies, Mary Mes-Hartree provided an overview of the experience in Canada:

- While most forest research organizations – whether seeking basic science or new product innovations – might best be described as fragmented, uncoordinated, and under-funded, the forest sector in Canada has accomplished an unprecedented model that revolves around a singular vision.
- FPIInnovations, at just five years young, was created as a merger of three independent forest products research organizations – Forintek, Paprican, and Feric – along with the Canadian Wood Fibre Centre of CFS.
- FPIInnovations has been a catalyst in creating an innovation hub for the forest sector, involving the industry, governments, universities, suppliers, and its own innovation capacity.

**KEY LEARNINGS -- BREAKOUT SESSIONS**

- Round I: Identify success stories of process or programs that are working exceptionally well within your respective organization and identify key concepts that would benefit others.
  - There were a wide range of stories and examples of success across the cadre of organizations represented. Perhaps the greatest surprise was the consistency of components that served to drive success. Among the keys:
    - A shared vision (one plan) founded on strong partnerships – including all sectors (government; industry; academia; and non-profits)
    - A common message (one voice); and
    - Focus (purposeful vigilance)
  
- Round II: Identify ways that each organization is addressing a rapidly changing environment where diminishing resources and growing expectations/increasing demands are the norm.
  - All organizations, regardless of sector, are being subjected to the dilemmas of tighter (if not declining) resources – both funds and people – at a time when constituencies are demanding more services. Among the keys to dealing with this new reality:
    - Enhanced use of technology to collect appropriate information and solid analytics to understand challenges and opportunities;
    - Greater dependence on true partnerships to spread the load;
    - Prioritization – saying “no” to the PIGs (pretty important goals); and more focus on the WIGs (wildly important goals); and,
    - Better use of “story telling” to help share key messages.
  
- Round III: In 10 years, how will your operating world look if we started doing things differently? (What would you stop doing and what would be the impact?)
  - All acknowledge that past practices and approaches (silos; individual scientist vs. ecosystems) are powerful anchors that impede process. Yet, there are already strong signs of change for the better. Using new processes and approaches, in 10 years:
    - The focus would be on the power and potential of “forests” to meet many social needs;
    - There would be a more common understanding and shared strategic vision and purpose within and across organizations;
    - Linkages between government and the private sector -- both for-profit and non-profit -- would be stronger and more productive;
    - The sector would be much better at understanding and deploying effective messages; and,
    - We would learn from the human health sector to focus more on “prevention vs. treatment.”
  - At the same time we’d stop doing some things:
    - Compete within the sector for the same piece of the pie vs. growing the pie;
    - Stop thinking “extraction” from forests;
  
- Round IV: Using an “appreciative inquiry” process, based on what’s working well in your organization now, how would we move these lessons/concepts forward to address the continent’s forest health problems?
  - Building on these general strategies for positive change the group then moved to identification of lessons that could be deployed to address continental forest health challenges. Among the findings:
    - Get the “right people” in the room to ensure success. In short, we must go beyond just the traditional forestry organizations to bring all with information and solutions to the table;
    - Develop an aligned, long-term vision and pathway to address the challenge;
    - Engage science, policy, and markets for a common agenda; and,
    - Acknowledge that new models are necessary, but even these must continue to evolve

- Round V: Get very specific about directions you wish to see advanced to address forest health with the understanding that a follow-up session of scientists may be tasked to help define the specific approaches and implementation plans.
  - Among the specific findings and recommendations include:
    - Use the power of the bi-national need to raise public understanding and support;
    - Leverage the resources and expertise of all organizations across political boundaries to develop and implement a holistic plan and vision;
    - Find ways to deploy new technologies for more rapid detection of problems (e.g. invasive pests); and,
    - Develop and deploy a set of filters to help drive the process:
      - Proactive
      - Systems approach
      - Inclusive – social, economic, and biological
      - Constantly add new players
      - Use new tools and technologies

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**RECOMMENDATIONS**

Participants in the Canada/U.S. Forest Health Summit agree that foundationally:

- The forests of the two countries are among the most important and valuable natural assets in the world;
- Insects, diseases and pests – whether endemic or exotic – move irrespective of political boundaries;
- The changing climate as evidenced by warming temperatures and longer freeze-free periods exacerbated by longer periods of drought is resulting in levels of forest loss and associated wildfires that far exceed the norm for the past several decades;
- The challenges are of such magnitude and the speed of change is occurring at such a pace as to overwhelm traditional methods of detection and response; and,
- Canada and the U.S., as well as our rich forests and our collective citizens will be well served by a more open, collaborative, shared holistic approach to the situation.

Therefore, the respective leaders from the public and private sectors assembled agree that:

- Past collaboration between and among our scientists and organizations provides a sound footing upon which to build a more strategic and holistic plan using the expertise and resources of respective organizations to respond to the continent's burgeoning forest health challenges "at the speed of need";
- Such response will be further fleshed out with specific plans and actions that start with perhaps a single issue or species to help establish a model for broader application;
- Sound information that is readily available to all who need it is vital to success;
- We must, using this sound data, establish early detection and responses to limit the number of issues that rise to the level of continental threat;
- Such work will be founded on a systems approach with a commitment to reduce duplication by increasing collaboration and taking advantage of differing capabilities, skills, and talents to segment problems to speed learning and response;
- We will include funders, performers, and users of scientific information in planning;
- We will, to the maximum extent practicable, seek to develop a "one plan; one voice" approach that is committed to persistence and clear prioritization of need;
- We will use a common sense of urgency;
- We will acknowledge the importance of applying adaptive management approaches that recognize we must learn by and while doing thereby adjusting as we learn; and
- We must draw lessons from the human health sector in focusing on prevention versus treatment.

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**APPENDIX****PARTICIPATION**

- **Ann Bartuska**, Deputy Under Secretary, USDA Research, Education, and Economics
- **Cindy Bell**, Executive Vice President, Corporate Development, Genome Canada
- **Catalino Blanche**, National Program Leader, Division of Environmental Systems, USDA National Institute of Food and Agriculture
- **Catherine Cobden**, Interim President & CEO, Forest Products Association of Canada
- **Jay Farrell**, Executive Director, National Association of State Foresters
- **Jacques Gagnon**, Director, Innovation and Intégration Division - Science & Programs Branch, Canadian Forest Service
- **Franz Hochstrasser**, Confidential Assistant, USDA Research, Education, and Economics
- **Andre Isabelle**, Director – Energy, Environment and Resources Division, Natural Sciences and Engineering Research Council
- **Catalina Lopez-Correa**, Vice-President, Scientific Affairs, Genome Quebec
- **David Kaplan**, Assistant Deputy Administrator, USDA Animal and Plant Health Inspection Service
- **Vasken Khabayan**, Counselor, Trade Policy, Embassy of Canada
- **Pierre Lapointe**, President & CEO, FPIInnovations
- **Jean-Pierre Martel**, Vice President, Strategic Alliances, FPIInnovations
- **Tom Martin**, President & CEO, American Forest Foundation
- **Glenn Mason**, Director General, Policy, Economics and Industry Branch, Canadian Forest Service
- **Mary Mes-Hartree**, Director General, Science Branch, Canadian Forest Service
- **Carlton Owen**, President & CEO, U.S. Endowment for Forestry and Communities
- **Jim Reaves**, Deputy Chief, Research & Development, USDA Forest Service
- **Tony Ritchie**, Executive Director, Plant Health and Biosecurity, Canadian Food Inspection Agency
- **Paul Robertson**, Minister-Economic, Embassy of Canada
- **Tom Rosser**, Assistant Deputy Minister, Canadian Forest Service
- **Steven Shafer**, Deputy Administrator, Natural Resources and Sustainable Agricultural Systems, USDA Agricultural Research Service
- **Deanna Stouder**, Associate Deputy Chief, Research & Development, USDA Forest Service
- **Dave Tenny**, President & CEO, National Alliance of Forest Owners
- **Tom Tidwell**, Chief, USDA Forest Service

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**News Release USDA**

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**United States, Canadian Forest Officials Hold Forest Health Summit Officials join to discuss common land threats, develop common strategies**

WASHINGTON, June 28, 2012 – U.S. Forest Service and Canadian Forest Service of Natural Resources Canada officials convened here for the first forest health summit between the two countries to discuss issues of common concern such as invasive species.

"The borders that separate the United States and Canada don't segregate threats to our natural resources," said U.S. Agriculture Secretary Tom Vilsack. "The countries share common environmental concerns. It is critical that we continue to collaborate and address current and future land management challenges as partners."

The overall goal of the summit was to explore and develop a cooperative vision and plan for actions to address forest health challenges. The Forest Service has a long history of working with Canadian researchers and land managers, but until now collaborations have typically occurred among individual researchers working on specific projects.

"This summit is an important first step toward the creation of a Canada-U.S. forest science agenda," said the Honorable Joe Oliver, Minister of Natural Resources Canada. "By identifying issues on which we can work together, we aim to maximize the value of the critical work that scientists and researchers are doing on both sides of the border to ensure the health of our forests and forest sector."

Warmer temperatures throughout the United States and Canada have threatened forests by increasing the risk of pests and associated diseases and pollutants. Mountain pine beetles and Emerald Ash Borers are having a significant impact on North America's forests.

The mountain pine beetle has directly caused tens of billions of dollars in damage in both countries. The Emerald Ash Borer, identified just over a decade ago near Detroit, and Windsor, Ontario, has eliminated millions of ash trees from urban, suburban and native forests. The insect is expected to cause more than \$2 billion per year in the two countries during the next 10 years.

Land managers from the two countries point to science, risk analyses, modeling and land based information systems as key focus areas to combat evolving land threats.

The mission of the U.S. Forest Service is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations. Recreational activities on our lands contribute \$14.5 billion annually to the U.S. economy. The agency manages 193 million acres of public land, provides assistance to state and private landowners, and maintains the largest forestry research organization in the world.

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**Governments of Canada and the United States to Strengthen Co-operation on Forest Health Issues**

Natural Resources Canada

June 28, 2012

**OTTAWA** — Forest sector officials from Canada and the U.S. gathered over the past two days in Washington, at the first-ever summit on forest health, to advance scientific co-operation on shared challenges. Officials identified research areas in which collaboration and knowledge exchange could enable both countries to better protect the health and sustainability of the two nations' forests.

"This summit is an important first step toward the creation of a Canada–U.S. forest science agenda," said the Honourable Joe Oliver, Minister of Natural Resources Canada. "By identifying issues we can work on together, we aim to maximize the value of the critical work that scientists and researchers are doing on both sides of the border to ensure the health of our forests and forest sector."

Canada and the U.S. have a long and successful history of collaborating on resource-related issues. "The borders that separate the United States and Canada don't segregate threats to our natural resources," said U.S. Agriculture Secretary Tom Vilsack. "The countries share common environmental concerns. It is critical that we continue to collaborate and address current and future land management challenges as partners."

The mountain pine beetle is one such challenge. The beetle is a native insect that has seriously impacted forest stands across the western half of North America, resulting in the direct loss of tens of billions of dollars in environmental services and economic benefits.

Participants at the forest health summit agreed that the nature and scope of the issues faced today across the continent may go beyond the individual capacity of any single organization. Greater knowledge exchange and a complementary research agenda would help rally science and policy expertise within organizations from both countries.

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Canada

Ressources naturelles  
Canada

Date: June 1, 2012

From: Tom Rosser, Assistant Deputy Minister, Canadian Forest Service  
Tom Tidwell, Chief, USDA Forest Service

Copy: Embassy of Canada, Paul Robertson, Minister-Economic  
Embassy of Canada, Vasken Khabayan, Counsellor-Trade Policy  
U.S. Endowment for Forestry and Communities, Carlton Owen, President & CEO

To: Canada: Invited Participants  
Canadian Council of Forest Ministers  
Canadian Food Inspection Agency  
Forest Products Association of Canada  
FP Innovations  
Genome Canada  
Natural Science and Engineering Research Council

U.S.: Invited Participants  
American Forest Foundation  
National Alliance of Forest Owners  
National Association of State Foresters  
National Science Foundation  
USDA, Agricultural Research Service  
USDA, Animal and Plant Health Inspection Service  
USDA, Research, Education, and Economics  
USDA, Natural Resources and the Environment  
USDA, National Institute of Food and Agriculture

**RE: Forest Health Summit**

Natural Resources Canada, Canadian Forest Service (CFS) and the USDA Forest Service (USFS) seek your participation at an invitation-only summit that will examine ways to enhance cross-border collaboration and improve response to the continent's forest health crises.

**Desired Outcome**

*Identify forest health challenges that are of strategic importance to the North American forest sector that would benefit from enhanced bilateral engagement and collaboration.*

*This will lead to a post-Summit "by invitation" event for public and private-sector institutions and scientists from Canada and the U.S. aimed at seeking solutions. Experts will have the opportunity to convene and assemble the information, expertise, planning, coordination, and collaboration necessary to find and implement next steps in a timely and cost-effective way.*

**Context**

Canada and the U.S. have a long and successful history of collaborating on varied natural resources and resource-related issues. Much of this work has occurred at the individual researcher or project level. In an era of increasingly complex threats that span the continent and the globe and in a time of growing resource limitation (human and financial), it is critical that we use this foundation of collaboration to build effective, efficient, and results-oriented models that can better address current challenges, employing what has been called “science at the speed of need.”

**One Continent; One Forest; One Threat**

The mountain pine beetle, a native forest pest, has seriously impacted forest stands across the western half of the continent. Disturbances of this type occur without respect for sovereign borders and generate tens of billions of dollars in direct losses and community and societal disruptions in the long-term. The exotic Emerald Ash Borer (EAB) identified just over a decade ago near Detroit, MI, and Windsor, ON, has in short order eliminated millions of ash trees from urban, suburban, and native forests. The costs and losses that will be generated over the next 10 years by this single pest have been estimated – without accounting for environmental impacts – at \$2 billion (US) per year. These costs will be borne by municipalities, property owners, nursery operators, and forest products companies. The reality is that mountain pine beetle and EAB are just two examples of a growing list of threats to North America’s forests.

**Movement of Goods: Threat and Opportunity**

Native and introduced pests have impact on this continent and abroad. Native pests disrupt domestic fiber supply and transform exports into a potential source of risk, threatening the forest estate of this continent and beyond. Maintaining access to export markets is key to the long term success of the North American forest sector, and an enhanced understanding of these risks and opportunities would serve all well.

**The Challenge: A Summit to Set a Vision and Course of Action**

Understanding that climate change is compounding our need for timely and cost-effective tools to respond to increasing risks of pests, diseases, and pollutants, the CFS and USFS seek your participation in the exploration and development of a cooperative vision, and a plan for shared specific actions that can meet the forest health challenges we currently face.

We propose to convene key leaders with an interest and a role to play in the future of North American rural and urban forests to establish a vision that will build on past and continuing collaboration between our two countries. We anticipate that subsequently, a meeting of scientists and other key leaders within our respective organizations will be necessary to further define a specific pathway for the vision and course of action we seek to establish.

**Summit Details**

The U.S. Endowment for Forestry and Communities, an important catalyst in development of the summit concept, will serve as summit convener and facilitator. The summit will take place at the Embassy of Canada, in Washington, DC, commencing with an informal reception and dinner on the evening of Wednesday, June 27<sup>th</sup> followed by a work session beginning at 9:00 am and concluding no later than 3:30 pm on Thursday, June 28th, 2012.

**Responses**

We look forward to your valuable participation at this summit. Should you have any questions or require additional information please contact Carlton Owen via email [carlton@usendowment.org](mailto:carlton@usendowment.org) or phone 864.233.7646.

## THURSDAY, JUNE 28, 2012

9:00 am to 9:15 am	Welcome and Challenge <ul style="list-style-type: none"> <li>■ Carlton Owen, President, U.S. Endowment for Forestry &amp; Communities</li> </ul>
9:15 am to 9:35 am	Putting the Challenge in Context <ul style="list-style-type: none"> <li>■ Tom Rosser, Assistant Deputy Minister, Canadian Forest Service (CFS)</li> <li>■ Ann Bartuska, Deputy Under Secretary, USDA Research, Education, and Economics</li> </ul>
9:35 am to 10:00 am	Discussion Round I
10:10 am to 10:30 am	Discussion Round I; Part 2
10:30 am to 10:40 am	Stretch Break
10:40 am to 11:30 am	Discussion Round II
11:30 am to NOON	Innovative Examples of Response <ul style="list-style-type: none"> <li>■ Jim Reaves, Deputy Chief, Research &amp; Development, USFS</li> <li>■ Mary Mes-Hartree, Director General, Science Branch (CFS)</li> </ul>
NOON to 12:40 pm	LUNCH
12:40 pm to 1:20 pm	Discussion Round III
1:20 pm to 2:10 pm	Discussion Round IV
2:10 pm to 2:30 pm	BREAK
2:30 pm to 3:00 pm	Wrap-up and Next Steps <ul style="list-style-type: none"> <li>■ Carlton Owen</li> </ul>
3:00 pm to 3:30 pm	CLOSING COMMENTS <ul style="list-style-type: none"> <li>■ Tom Rosser</li> </ul>

**Pre-Summit Background Paper**  
**Canada/U.S. Forest Health Summit**  
**Washington, DC**  
**June 27-28, 2012**

**Process and Motivation**

*More than one-third of the total land area of Canada and the United States (U.S.) is blanketed with forests. We share many ecologic, socio-economic and other commonalities, and have similar needs with regard to forest science and forest products research. Historically the two countries have benefitted greatly from pooling their expertise on selected issues. However, there is now a growing opportunity for shared benefit in light of more complex challenges in and around our forests, as well as comparatively fewer resources to deal with them.*

In December 2011, the heads of the U.S. and Canadian Forest Services' requested their staff to work together to identify a small package of opportunities to enhance bilateral collaboration in a way that would add value and be both strategic and cost-effective. *Just a preliminary review and enumeration of existing initiatives revealed that, broadly speaking, pests, climate change, and fire management dominate an already extensive field of active bilateral collaboration. Additional work also falls in the area of mapping or spatial-analysis given the geographic link between Canada and the U.S. Outside of the basic science arena, there is notable collaboration in the area of forest products research.*

Overall, however, it is clear that the nature of collaboration is varied and indicative of a range of drivers such as historic links, geographic proximity and professional interests. Much appears to be supply driven – **we do it because we can** – rather than demand driven – **we do it because we need to or should**. *The objective of this summit is to engage more strategically on a bilateral basis taking into account existing collaboration to advance to a more strategic and result-oriented path that would benefit the forests and peoples of both countries.*

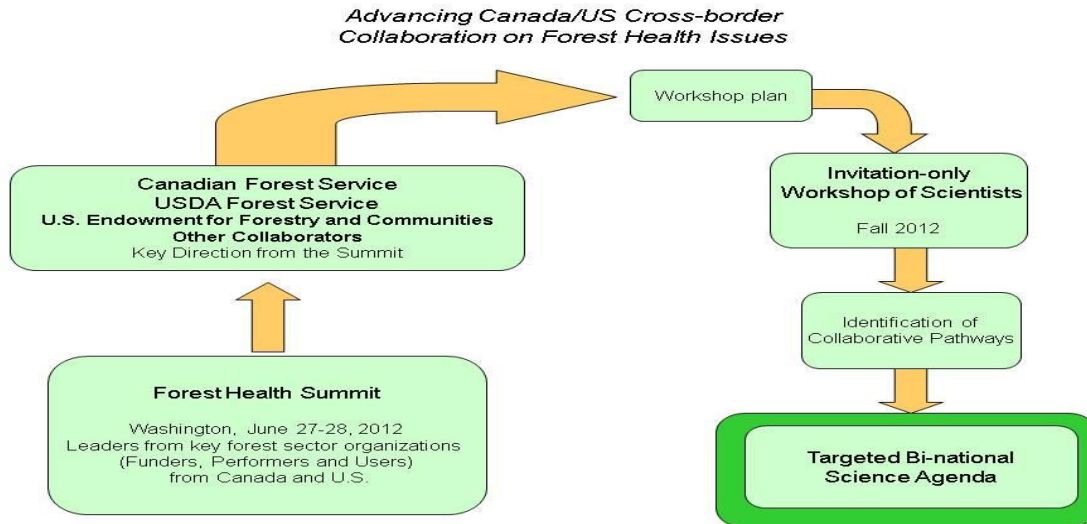
As the two federal authorities with lead responsibility for forests and forestry at their respective national levels across our two countries, the Forest Services' understand that they are not the only public or private interests with a stake in this topic. Therefore, we are seeking to gather top leaders from each of the primary public and private entities with a respective national scope and vision, to determine if the time is right to take a more holistic look at threats, opportunities, and benefits to a more strategic and coordinated approach to forest issues at the continental level. *While we know that there are many areas of interest and engagement, we have chosen as a starting point to limit this initial survey and plan to those topics directly related to forest health and sustainability.*

**One Continent; One Forest; One Threat**

One Continent: Canada and the U.S. not only share the world's longest border of any two nations, but with daily crossings of 400,000 people and \$1.4 B in trade, *our countries are the world's largest trading partners* as well. One Forest: While we share a continent, *perhaps no feature symbolizes our common bond more than our forests*. Ranked third and fourth respectively in total forest area globally, when combined the forest area of the two countries is exceeded only by that of one other. Our peoples enjoy the bounty of those forests and their many benefits from clean air, fresh water, diverse wildlife and fish, places of recreation and natural beauty, to the greenest of all building products. One Threat: Statistics are difficult to quickly combine, but perhaps the U.S. *National Report on Sustainable Forests- 2010*, serves as an indicator. That report finds that *levels of forest disturbance are rising, including a three-fold increase in insect-induced mortality relative to the previous report less than a decade earlier.*



## Proposed Pathway



## Planned Invitees

While our intent is to be open and inclusive, in the near-term the sponsoring organizations felt that it was best to begin with a smaller group of organizations and individuals who could review, consider, and set the strategic direction for the effort. In doing so we have *limited invitees to those organizations – both public and private – that not only have a key stake in the health of the continent's forests, but also who have a national or global perspective and are recognized by their peers and others as having a significant role to play in protection and management of each nation's forests respectively.*

### Canada: Invited Participants

Canadian Council of Forest Ministers  
 Canadian Food Inspection Agency  
 Forest Products Association of Canada  
 FPInnovations  
 Genome Canada  
 Natural Sciences and Engineering Research Council

### U.S.: Invited Participants

American Forest Foundation  
 National Alliance of Forest Owners  
 National Association of State Foresters  
 National Science Foundation  
 USDA, Agricultural Research Service  
 USDA, Animal and Plant Health Inspection Ser.  
 USDA National Institute of Food and Agriculture  
 USDA, Natural Resources and the Environment  
 USDA, Research, Education, and Economics

## Desired Outcome

*To identify forest health challenges that are of strategic importance to the North American forest sector that would benefit from enhanced bilateral engagement and collaboration.*

Next Steps: *This will lead to a post-Summit "by invitation" event for public and private-sector institutions and scientists from Canada and the U.S. aimed at seeking solutions. Experts will have the opportunity to convene and assemble the information, expertise, planning, coordination, and collaboration necessary to find and implement next steps in a timely and cost-effective way.*