Testimony to the Vermont State Legislature, House Committee on Agriculture, Food Resiliency, and Forestry

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Notes Regarding: Value of U.S Forest Service Research Science and Collaborations with the University of Vermont

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Thank you for the invitation to testify today about the large-scale cuts and elimination of scientific research capacity within the United States Forest Service. I have been on the forestry faculty at UVM for 26 years and over that time have cooperated with Forest Service scientists numerous times and have worked on USFS experimental forests, both within Vermont and New England and across the country. I have witnessed the public benefits and impacts of that research firsthand. I currently serve as UVM's liaison to the Hubbard Brook Ecosystem Study in New Hampshire.

Based on this experience, I hope to be a voice for the value of science funded and conducted across all arms of the federal government, including the U.S. Forest Service Research Stations and Experimental Forests.

I would like to address five key points today:

1. Cuts to the USFS research branch is part of an overall retreat from support for science across federal agencies

   Since at least the 1950s, the United States has been recognized as the international leader in scientific research. We are retreating from that leadership and ceding that ground to our competitors, except in a few very narrow areas of focus such as AI and quantum computing. We are seeing an exodus of some of our best scientists in other fields, such as the natural and social sciences and certainly in the climate sciences.

   Key Points:
   - There has been a 55% cut to the budget of the National Science Foundation (NSF)
   - Many important science programs and capacities have been completely eliminated, such as the Interagency Global Change Research program

- The administration has released a proposal for 2027 that provides zero funding for the R&D branch. Congress, which has the final say over federal spending, has not yet responded.
- On 31 March, the forest service announced it would close 57 of its 77 research sites. That is ¾ of its research sites. The agency has stated on record (see Nature article) that this is because of a deferred maintenance backlog. Former USFS have responded by saying the RD backlog is a "drop in the bucket"

2. USFS science is unique and different from other agencies

   Research has been part of the Forest Service's mission since 1905. First facility in 1908 (Arizona), research structure codified in the 1920 and 30s …always seen as essential to the science-based management of the nation's forests.

   Applied research is critical for addressing contemporary forest management problems and thus has direct impacts on Vermont, the region, and the entire United States. Critical for research on sustainable timber management, forest fire risk reduction, flood protection, control of invasives species, management of wilderness, pollution, outdoor recreation, and adaptation to climate change.

   "The forest service's Research and Development (R&D) branch is the world's largest forestry-research organization, with roughly 1,000 employees at 77 sites. Its scientific track record includes identifying the exact species of fungus that causes white-nose syndrome in bats and creating a woodland-fire model used in multiple countries." – From Nature. https://www.nature.com/articles/d41586-026-01493-w

3. USFS research stations and experimental forests perform critical and groundbreaking research

Example of the Burlington/UVM-based unit of the Northern Research Station (NRS):

Gus Goodwin, Senior Conservation Planner with the Vermont Chapter of The Nature Conservancy, wrote the following in a letter addressed to WCAX television: *"The USFS Northern Research Station provides essential leadership, technical expertise, and resources to help address some of the greatest challenges facing our forests. Our project—which seeks to breed disease resistant elms—requires an incredible array of expertise and commitment to work on long-term projects. A decade's worth of collaboration has brought us to the point of being able to identify American elms that can tolerate exposure to Dutch Elm Disease. The next phase, which we are hoping will be led by scientists from the*

Burlington Lab, is to propagate and share the best surviving trees so that American elm can be restored to floodplains and backyards across New England.

USFS research has played in understanding the forests of the Northeast. From understanding basic forest dynamics, identifying best practices for timber harvests, tracking the impacts of acid rain, and how to improve wildlife habitats, the USFS has been a leader for decades. The current research of scientists at the Burlington Lab, which focuses on helping us address invasive forest pests and pathogens (including projects like ours that try to breed disease resistant trees) is just as essential."

We live in one of the world's greatest remaining forests and the USFS Northern Research Station helps us understand it, manage it, and protect it better."

Facts and figures about the Burlington unit of the NRS:

- Transferred the USFS building to UVM in 2013 and saved RSENR $13 million in renovation costs. The transfer of NRS as lab facility allowed RSENR to renovate without a floor dedicated to labs in the new Aiken Center.
- Northeastern States Research Cooperative funding that moves through the NRS – valued in the millions
- 100s of Publications and presentations – with RSENR as well as CALS and CAS
- Currently 5 full-time USFS employees. Currently support Dr. Chris Hansen, UVM full time on elm project and ~4 UVM students part time
- NRS Scientists served on many Master's and PhD graduate committees; Some of the state's best forest scientists have been trained at the UVM/Burlington NRS unit. Examples:
  - Josh Halman – Forest Health Lead, VT Forests, Parks and Recreation
  - Kendra Collins – Director of Forest Programs, Northern Forest Center (formerly New England Science Coordinator, The American Chestnut Foundation)
  - Ali Kosiba – Extension Assistant Professor of Forestry, UVM
- For many years, NRS Scientists secured funding and created Joint Venture Agreements with RSENR that aided in hiring of technicians and work-study students.
- NRS Scientists, Paul Schaberg and Paula Murakami, co-developed the DendroEcological Network (DEN) with the Forest Ecosystem Monitoring Cooperative (partnership between FS, northeastern state agencies, and UVM). The DEN is an open-source archive of tree ring data and associated ecological data.

4. USFS science provides direct benefits to universities and local communities

   Key points:

   - NRS units are embedded within their communities and address local/regional concerns. Those functions will be lost through consolidation.
   - USFS research science is critical and essential for mitigating that megafire problem.
   - Other areas of direct benefit to local community: Silviculturl guides; assistance with control of invasive species. Research that supports the State and Private Forestry arm of the USFS.
   - Many example of cooperation with university scientists at UVM.

     - NRS Scientists have co-taught classes, participated in advanced field-based service-learning seminars, and guest-lectured at RSENR, CALS, CAS; i.e., Human Health and the Environment, Dendrology, Dendrochronology, Alpine Plant Ecology
     - Currently collaborating on research projects with multiple UVM scientists
     - 3 shared RSENR scientist positions – FS paid for ½ salaries for several years

5. State legislatures can support the USFS science program in various ways

   Example of Hubbard Brook Experimental Forest: Considered for closure. Announced on March 11 that it will be spared due to lobbying by the NH Congressional delegation. Barlet Experimental Forest is still under reviewed by may be spared also. Demonstrates potential for Congressional delegations to work with the USFS, encouraging them to reconsider closures.

   Work with Congressional delegation. Work with UVM. Support investments in cooperative research between USFS, academic institutions, and state agencies like the Vermont Department of Forests, Parks, and Recreation.

   The research stations and experimental forests create synergies at all levels, leading to disproportionate productivity, impact, and benefit. State legislatures have many tools at their disposal to encourage such synergies, for example through appropriations and incentive funding.