

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 056-C2

Minnesota Forest Invasives: Assessment and Statewide Recommendations

Topic Area: C2. Invasive Species - Terrestrial

Total Project Budget: \$ 130,096

Proposed Project Time Period for the Funding Requested: 2 yrs. July 2013 - June 2015

Other Non-State Funds: \$ 0

Summary:

Emerald Ash-Borer and other forest invasives are threatening Minnesota and have the potential for large economic and ecological impacts. This project will assess our current response and develop statewide recommendations.

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Location

Region: Statewide

County Name: Statewide

City / Township:

| | | | |
|----------------------------------|---------------------------------|-------------------------------------|-------------------------------------|
| <u> </u> Funding Priorities | <u> </u> Multiple Benefits | <u> </u> Outcomes | <u> </u> Knowledge Base |
| <u> </u> Extent of Impact | <u> </u> Innovation | <u> </u> Scientific/Tech Basis | <u> </u> Urgency |
| <u> </u> Capacity Readiness | <u> </u> Leverage | <u> </u> Employment | <u> </u> TOTAL <u> </u> % |



Environment and Natural Resources Trust Fund (ENRTF)

2012-2013 Main Proposal

PROJECT TITLE: Minnesota’s forest invasives: Assessment and statewide recommendations

I. PROJECT STATEMENT

As Minnesotans pay more attention to some of the most disruptive aquatic invasives, many terrestrial invasive species affecting forests, some with potentially devastating economic and ecological impacts to the state, are not being adequately addressed. Minnesota’s mix of forests and prairies and public and private patchwork of ownership increase the state’s susceptibility to invasives and complicate the design of public policy to best manage these pests, pathogens and plants. Coupled with increasing development pressures, wildlife habitat fragmentation, domestic and international trade, and other factors, terrestrial invasive species management becomes a very complex problem to address, buoying the need for a more strategic and integrated response.

Many invading pests, pathogens, and plants are newly arrived or are rapidly approaching Minnesota’s borders and threaten our native tree species. We are well acquainted with some, such as Dutch Elm Disease and Oak Wilt, but we are less familiar with other invasive species that target:

- Ash (Emerald Ash Borer),
- Aspen and Oak (Gypsy Moth),
- Oak (Sudden Oak Death and Goldspotted Oak Borer),
- Walnut (Thousand Cankers Disease),
- Maple (Asian Long-Horned Beetle),
- Jack Pine (Mountain Pine Beetle),

and the list goes on. These problems are expected to worsen. On average, two new exotic forest pests are introduced to the United States each year. As we have learned from aquatic invaders like Asian carp, the ability to stay in front of invading species through prevention, eradication, suppression, and slowing their spread is paramount in minimizing their impacts. Failure to do so can have great economic and ecological impacts. Across the country, governments, private entities and individuals have spent hundreds of millions of dollars in treating outbreaks of the invading species listed above, and are expected to spend much more in the future.

We propose a review of the state’s capacity to address terrestrial invasive species threats to forests and the development of recommendations to better position Minnesota in the years to come, by identifying current and future threats, analyzing these threats and making recommendations regarding response to these threats. Determining the potential economic impacts on the state and understanding our abilities to influence the movement of these invasives will allow for a more strategic use of our resources in managing landscapes in the face of these pests, pathogens and plants.

Building on past efforts within the state (e.g. MN Forest Protection Plan, MN forest pest work group, MN State Management Plan for invasive species) and elsewhere in the region and beyond (Great Lakes Forestry Alliance, Northeastern Area - USDA Forest Service), we propose an update and synthesis of threats and impacts, both economic and ecological, and an assessment of the adequacy of our collective response to terrestrial invasives affecting forests. Recognizing the complex web of federal and state roles and agencies that complicate efforts to develop meaningful coordinated policy recommendations, our goal is to position Minnesota to be better able to move forward in a strategic and integrated manner that allows us to use resources efficiently, better recognizing when actions are warranted and when actions are fruitless.

II. DESCRIPTION OF PROJECT ACTIVITIES

Total Request: \$130,096

Activity 1: Synthesis of current knowledge, analysis and response.

Budget: \$51,390

This analysis would include an updated review of terrestrial pests, pathogens and plants, as well as a synthesis of risk and economic impact assessments. We would also conduct a thorough review of agency plans and responses, including a review of agency roles and responsibilities, adequacy of risk assessment activities, and current funding and infrastructure in place to deal with these problems.

| Outcome | Completion Date |
|--|-------------------------|
| 1. Compilation/update of current and potential forest pests, pathogens and invasive plants. | <i>December 1, 2013</i> |
| 2. Synthesis of current risk assessments, impact analyses, and prioritization criteria. | <i>November 1, 2013</i> |
| 3. Synthesis of response (federal, state, local agencies, other private and non-profit sectors). | <i>January 1, 2014</i> |

Activity 2: Analysis of information needs and adequacy of response. **Budget:** \$48,241

Utilizing the information gathered and expertise of stakeholders, we will assess the adequacy of current information used to make strategic and efficient decisions and make recommendations regarding crucial information needs. The analysis of response will be assessed through interviews and questionnaires addressing the following questions:

- Is the current response sufficient?
- What are current funding trends and what are the needs?
- Are we investing in the right areas and what are the tradeoffs?
- What are the costs of various responses including doing nothing?
- What could be done with additional funding? and
- Why have some efforts been successful while others failed?

| Outcome | Completion Date |
|---|------------------------|
| 1. Review of adequacy of information to make strategic decisions. | <i>May 1, 2014</i> |
| 2. Analysis of public and private response to terrestrial forest invasives. | <i>May 1, 2014</i> |

Activity 3: Development of statewide policy recommendations **Budget:** \$30,465

We would develop recommendations to ensure that our scarce public and private resources are used in the most efficient, strategic and coordinated manner possible.

| Outcome | Completion Date |
|---|------------------------|
| 1. Development of criteria for evaluating current policies | <i>May 1, 2014</i> |
| 2. Development of recommendations regarding information needs, proper agency roles and responsibilities, needed levels of investment, efficient administrative structures and needs for coordinated threat and impact analyses. | <i>July 1, 2014</i> |

III. PROJECT STRATEGY

A. Project Team/Partners

The project team will be led by Dr. Calder Hibbard, policy analyst for the Minnesota Forest Resources Council. Other team members will include Dr. Brian Aukema, assistant professor of Entomology (UMN), Dr. Kent Kovacs, research fellow in applied economics (UMN); and Dr. Robert Venette, research biologist with the USDA-Forest Service. We will utilize a cross-disciplinary approach, including expertise in entomology, forestry, biology, economics and policy development in assessing and evaluating forest-related invasive species. The trust fund would fund one work study undergraduate student, two grad students, Kent Kovacs time and 1 month of Dr. Aukema's summer salary. Dr. Hibbard and Dr. Venette, as well the balance of Dr. Aukema's, time will not be funded by the Trust Fund.

B. Timeline Requirements

The project will be completed in less than 24 months: approximately 6 months for Activity #1, 7 months to conduct Activity #2, and 5 months to complete Activity #3.

C. Long-Term Strategy and Future Funding Needs

It is important to note that though this project is of a relatively short duration, it is intended to inform future efforts in activities related to slowing the spread of forest-based terrestrial invasive pests, pathogens, and plants.

2012-2013 Detailed Project Budget

IV. TOTAL ENRTF REQUEST BUDGET 1 year

| <u>BUDGET ITEM</u> | <u>AMOUNT</u> |
|---|-------------------|
| Personnel: Salary and fringe (0.0743 for a work-study indergraduate student for 1 year) | \$ 8,896 |
| Contracts: UMN - Kent Kovacs, research fellow, this contract will fund Dr. Kovacs review and synthesis of economic impact analyses (Salary and fringe (0.35) for 1 year (0.33 FTE). (\$35,000) UMN - Dr. Brian Aukema 1 Month of Summer Salary (Salary and fringe (0.21) for 1 year (0.08 FTE) (\$12,100) Graduate student for compilation/update and analysis of current and potential threats. (Salary and fringe (0.24) for graduate student for 1 year, 1.0 FTE) (\$40,500)(Adminstered by Dr. Aukema) Post-Doc for synthesis of risk assessment modeling and other impact analyses. (Salary and fringe (0.36) for Post Doc for one year, (0.5 FTE)(\$30,600) . (Dr. Robert Venette will adminster) | \$ 118,200 |
| Equipment/Tools/Supplies: | \$ - |
| Acquisition (Fee Title or Permanent Easements): | \$ - |
| Travel: <i>This project will require some in-state travel for interviews and convening meetings with stakeholders and various agency contacts</i> | \$ 3,000 |
| Additional Budget Items: Will be convening both scientific experts as well as stakeholders in regards to forest invasives. This will require various meeting expenses. Meetings will try to use free locations for meetings but will require expenses such as refreshments and meals. | |
| TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST = | \$ 130,096 |

V. OTHER FUNDS

| <u>SOURCE OF FUNDS</u> | <u>AMOUNT</u> | <u>Status</u> |
|---|---------------|---------------|
| Other Non-State \$ Being Applied to Project During Project Period: | \$ - | |
| Other State \$ Being Applied to Project During Project Period: | \$ - | |
| In-kind Services During Project Period: Project management, policy review and recommendation design. Calder Hibbard salary and fringe (0.35) for 1 year (0.5 FTE) (\$86,081) | \$ 43,041 | |
| Remaining \$ from Current ENRTF Appropriation (if applicable): | \$ - | |
| Funding History: | \$ - | |

Project Manager Qualifications

Calder Hibbard, Minnesota Forest Resources Council (MFRC) policy analyst, leads the policy development program with the MFRC and has extensive experience in project management and forest policy analysis. He has a Ph.D. in Natural Resource Sciences and Management, a M.S. in Forestry, and a B.S. in Natural Resources and Environmental Studies. He has conducted analysis of forest policy on a local, state, and national level and managed many projects. Most recently he has served as the Project Director for a project entitled 'Maintaining the forestland base in Minnesota.' His additional experiences include assessment of state forest tax policies, intergovernmental roles regarding non-federal forestland, state strategic planning for the use and management of forest resources, assessment of family forest certification, assessment of public participation and access to information frameworks, review of state legal property rights frameworks, among many other projects. Prior to his current position, Calder worked for the University of Minnesota as a research specialist, as well as in the private sector.

Organization Description

The Minnesota Forest Resources Council (MFRC) is a 17-member governmental organization working to promote long-term sustainable management of Minnesota's forests by coordinating implementation of the Sustainable Forest Resources Act (SFRA) (M.S. 89a), and advising the Governor and federal, state, and local governments on sustainable forest resource policies and practices. Created in 1995, the MFRC operates within the policy framework set forth in the SFRA to (1) pursue the sustainable management, use, and protection of the state's forest resources to achieve the state's economic, environmental, and social goals, (2) encourage cooperation and collaboration between public and private sectors in the management of the state's forest resources, (3) recognize and consider forest resource issues, concerns, and impacts at the site and landscape levels, and (4) recognize the broad array of perspectives regarding the management, use, and protection of the state's forest resources, and establish processes and mechanisms that seek these perspectives and incorporate them into planning and management.

The primary responsibilities of the MFRC include: advising the Governor and public agencies on forest policies and practices that result in sustainable forest management, use, and protection; developing landscape-level forest planning and coordination processes; and developing comprehensive timber harvesting and forest management guidelines and a monitoring program. Recent accomplishments within the policy program include providing staffing to the Governor's task force on the competitiveness of the primary forest products industry, providing advice to the Governor on federal roadless areas, providing advice to the Governor and public agencies regarding invasive species, and the commissioning of a study of forestland parcelization in Minnesota.

The MFRC is made-up of a diverse group of public and private interests and is designed to encourage collaboration between those entities represented as well as many others that have an interest in Minnesota's forest resources. The MFRC plays a unique statewide role in bringing together the key interests regarding forest resources issues and policies to work collaboratively in crafting workable policies and solutions to key strategic forest resource management issues and problems.

