



Environment and Natural Resources Trust Fund

2023 Request for Proposal

General Information

Proposal ID: 2023-078

Proposal Title: Reducing Woodsmoke Emissions Exposure From Recreational Fires

Project Manager Information

Name: Jon Hunter

Organization: American Lung Association in Minnesota

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Project Basic Information

Project Summary: This project will identify, test, and implement a public engagement effort with a high likelihood of reducing health impacts from recreational fire smoke while enabling ongoing enjoyment of backyard recreation.

Funds Requested: \$197,000

Proposed Project Completion: June 30, 2025

LCCMR Funding Category: Small Projects (H)

Secondary Category: Air Quality, Climate Change, and Renewable Energy (E)

Project Location

What is the best scale for describing where your work will take place?

Region(s): Metro

What is the best scale to describe the area impacted by your work?

Region(s): Metro

When will the work impact occur?

During the Project and In the Future

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Spending time with family and friends in the backyard around an open fire is enjoyed by many people in the Twin Cities, but woodsmoke can impact the health of people in our communities. Woodsmoke contains tars, gases, soot and chemicals like carbon monoxide, polycyclic aromatic hydrocarbons (PAHs), dioxins, volatile organic compounds, and fine particles that impact the health of people who inhale them.

Short term exposure to fine particles increases the risk of respiratory infections, triggers asthma attacks and exacerbates and increases the risk of lung disease. Woodsmoke from backyard fires not only affects the individual around the fire but other neighbors in the surrounding area. Some individuals are more vulnerable to the effects of inhaling woodsmoke. This includes young children, whose lungs are not fully developed, the elderly and individuals living with asthma, lung disease, or heart disease.

Our challenge is to identify what actions people will adopt that enable continued enjoyment with family and friends while preventing or reducing exposure to harmful smoke. This project focuses on the Twin Cities metro area, where wood burning is most commonly done for recreation rather than heat and the population density exposes more people to the emissions.

What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.

This project will identify and pilot several potential actions that individuals and families could take to avoid or reduce woodsmoke emissions and exposure. The most effective action, as measured by a combination of likelihood of wide adoption and level of emission reduction, will be implemented through a broader outreach campaign.

The project will be implemented through three phases. First, we will research and select several potential actions that could be used to reduce or eliminate the amount of woodsmoke generated during a recreational fire. This process will include public engagement to identify people's perceptions of recreational wood burning and potential barriers to changing current practices. Second, the actions with the highest potential for broadly reducing exposure to emissions will be piloted and evaluated to gauge their real-world effectiveness and rate of adoption. Third, the most promising action will be refined and scaled up for a larger public engagement effort to create a replicable model, demonstrate its effectiveness, and promote its use in other communities.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

Through the activities of this project, we will determine people's perceptions of wood burning during backyard fires and the benefits and barriers to reducing or eliminating woodsmoke emissions. The project will also pilot several actions to gauge how broadly they might be adopted and how effective they would be at reducing exposure to woodsmoke emissions. Ultimately, the project will identify and implement a public engagement effort with a high likelihood of reducing health impacts from recreational fire smoke that can be expanded on in future years and replicated in other communities interested in improving neighborhood air quality.

Activities and Milestones

Activity 1: Research into barriers and benefits of reducing recreational wood burning. Identification of potential pilot projects.

Activity Budget: \$52,000

Activity Description:

The project team will identify and evaluate a comprehensive list of previous efforts in Minnesota and other states that have been used to attempt to reduce the amount of smoke generated during recreational fires. Examples of these activities include education on properly storing firewood to ensure it is dry while burning, exchange programs for old outdoor wood burning equipment, and promoting alternatives to wood burning.

The project will work with community partners and opinion-research experts to identify people’s perceptions of recreational wood burning. This will include exploring the potential barriers for current users to changing their wood burning practices and identifying which benefits derived from cleaner recreational experiences might help encourage people to work to overcome the barriers.

Based on the evaluation of previous campaigns and the identified barriers and benefits from community members, a list of potential campaign projects will be developed to test and evaluate in Activity 2.

Activity Milestones:

Description	Completion Date
Document and evaluate previous local and national public education/engagement efforts to reduce recreational woodsmoke.	September 30, 2023
Identify perceptions of recreational wood burning and potential barriers to changing current practices.	November 30, 2023
Identify top actions with the highest potential to reduce smoke exposure from recreational wood burning.	December 31, 2023

Activity 2: Test strategies and pilots projects to reduce woodsmoke emissions

Activity Budget: \$60,000

Activity Description:

Following Activity 1, several pilot projects will be created to explore a variety of ways that may accomplish the ultimate goal of reducing exposure to woodsmoke emissions from recreational fires. In general, each pilot is expected to provide a person with the tools and encouragement necessary to commit to a voluntary action that reduces emissions. Pilots will be informed by research on best practices that increase the likelihood of successful adoption and continued implementation. The exact efforts will be determined during Activity 1, but examples of these types of best practices include the use of visual queues, prompts, or other reminders near where an action occurs to remind a person of their desired activity or having people sign a voluntary commitment to take an action.

Before pilot projects are tested in the real world, additional opinion research through focus groups, surveying, or other methods will be used to evaluate the perceptions of the pilot concepts and their potential likelihood of success.

The refined pilot projects will be implemented through community partnerships. Projects will be evaluated for their effectiveness, which will be measured through a variety of metrics such as how broadly they were adopted and the amount of woodsmoke reduced.

Activity Milestones:

Description	Completion Date
Develop pilot projects to test actions identified during Activity 1 for ease and effectiveness.	March 31, 2023
Use community engagement and opinion research to refine pilot project concepts before testing.	May 31, 2023
Test and evaluate pilot project actions to measure emission reduction potential and ease of adoption.	August 31, 2023

Activity 3: Expand and implement most successful program to reduce recreational woodsmoke pollution.

Activity Budget: \$85,000

Activity Description:

Following the evaluation of the pilot projects in Activity 2, the most promising action will be refined and scaled up for a larger public engagement effort to create a replicable model, demonstrate its effectiveness, and promote its use in other communities. The selected process will be broadly implemented around the Twin Cities metropolitan area.

Following successful implementation, we will:

- a. Analyze the effectiveness of the project based on success indicators.
- b. Create a comprehensive report that documents project methods and findings.
- c. Communicate information about the program and findings to community members, the public and other important audiences.
- d. Document best practices and areas for improvement.
- e. Create a package of materials and information that enable others to easily implement the project in other communities.

Activity Milestones:

Description	Completion Date
Project with highest likelihood at reducing exposure to woodsmoke emissions scaled up for full implementation.	October 31, 2023
Evaluation of full implementation completed.	May 31, 2025
Final report created and project outcomes packaged for easy replication in new communities.	June 30, 2025

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Megan Kuhl-Stennes	Minnesota Pollution Control Agency	Ms. Kuhl-Stennes is the Neighborhood Air Lead with MPCA, which includes working to help reduce exposure to local sources of air pollution. She serves as an advisor for the project.	No

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?

Project results will be analyzed and shared publicly in a final report to show program effectiveness, lessons learned, possible next steps, and insights on replication in other communities. The framework for this project will also be shared with partner organizations and others working around the country looking to address air pollution from recreational fires.

The project itself will be complete at the end of the LCCMR project period and will not require any additional funding. Project partners may seek out additional funding sources to continue promoting effective strategies identified by the project to further reduce exposure to harmful air pollution.

Project Manager and Organization Qualifications

Project Manager Name: Jon Hunter

Job Title: Senior Director, Clean Air

Provide description of the project manager’s qualifications to manage the proposed project.

Jon Hunter is a senior director in the Clean Air program at the American Lung Association, where he oversees three staff. He has worked on air quality issues since beginning with the Lung Association in 2010. The organization’s clean air program activities in Minnesota are 100 percent grant funded through private and federal partnerships. Jon is responsible for funding development and program administration for the Clean Air team. His program experience includes developing and executing public education campaigns; facilitating pass-through funding opportunities that support reductions in air pollution; developing project partnerships; and providing technical assistance to project partners, companies, consumers, vehicle fleets, retail fuel stations, and others.

Jon is the co-chair of Clean Air Minnesota, a coalition of air quality leaders convened by Environmental Initiative who are working voluntarily and proactively to reduce man-made sources of fine particulate matter and ground-level ozone. Jon and other Lung Association staff have been active with Clean Air Minnesota’s woodsmoke reduction team since the workgroup’s initial creation, working to implement voluntary efforts that improve air quality.

Prior to joining the Lung Association, Jon worked on a variety of environmental, water, and energy topics with other nonprofit organizations. He graduated in 1999 with a B.A. in physics from Hamline University in St. Paul, MN.

Organization: American Lung Association in Minnesota

Organization Description:

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease. One of our strategic imperatives is to champion clean air for all. We work to protect public health from air pollution to ensure that all Americans have air that is safe and healthy to breathe.

Our team educates people about how fuel and energy choices affect the environment and air quality. We provide resources and work on projects that help people identify voluntary ways they can reduce their emissions. In collaboration with public and private partners, we promote cleaner fuel options and practices through customized education and outreach programs

Our work to reduce woodsmoke pollution includes educating the public about the health impacts of wood smoke, providing information on how to protect yourself from woodsmoke emissions, and how to reduce your wood smoke pollution.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Senior Director		Overall project management and project design. Staff and partner support.			30%	0.3		\$31,750
Program Manager		Project research, design, and execution. Outreach and education.			30%	0.5		\$39,500
Program Specialist		Project research and implementation. Community engagement.			30%	0.5		\$35,200
							Sub Total	\$106,450
Contracts and Services								
TBD	Professional or Technical Service Contract	The consultant will provide project design coaching as partners work to research and evaluate potential emission reduction initiatives, pilot and evaluate selected efforts, and finalize the primary implementation project.				0.01		\$10,000
TBD	Sub award	Stipend for a community-based organization or neighborhood association to support pilot testing and final project implementation. Work is anticipated to include community engagement to support pilot design, test and evaluate concepts, and demonstrate the success of the final initiative.				0.1		\$20,000
TBD	Professional or Technical Service Contract	Consultant to design and execute focus groups or other means of opinion research to develop and evaluate pilot project concepts and design.				0.1		\$30,000
							Sub Total	\$60,000
Equipment, Tools, and Supplies								
	Tools and Supplies	Supplies for pilot and final project implementation.	Depending on the pilot projects selected, various supplies will be needed to support the actions taken by participants. These will serve as queues or reinforcement for the selected					\$29,500

			activities to ensure their proper implementation.					
							Sub Total	\$29,500
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Transit rides or approved mileage reimbursement rates for in-town travel.	Travel to meetings, community outreach events, and other engagement activities.					\$50
							Sub Total	\$50
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	Educational materials (4000 @ \$0.25 each)	Handouts and other educational materials for participant recruitment and support through pilot projects and final implementation..					\$1,000
							Sub Total	\$1,000
Other Expenses								
							Sub Total	-
							Grand Total	\$197,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Attachments

Required Attachments

Visual Component

File: [3fe3a523-00e.pdf](#)

Alternate Text for Visual Component

image of a family enjoying a backyard without woodsmoke....

Financial Capacity

File: [3d7cd39b-63c.pdf](#)

Board Resolution or Letter

Title	File
Board Letter	013f72e1-479.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have potential for royalties, copyrights, patents, or sale of products and assets?

No

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

N/A

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

N/A

Does your project include original, hypothesis-driven research?

Yes

Does the organization have a fiscal agent for this project?

No



Submitted by
American Lung Association in Minnesota