

**Environment and Natural Resources Trust Fund  
2015 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 107-E**

Reducing Wood Smoke: Protecting Our Health and Environment

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**Category:** E. Air Quality, Climate Change, and Renewable Energy

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**Total Project Budget:** \$ 1,116,570

**Proposed Project Time Period for the Funding Requested:** 2 years, July 2015 - December 2017

**Summary:**

The purpose of this project is to reduce harmful wood smoke pollution by raising public awareness about associated health risks and replacing high-polluting wood stoves and fireplaces with low-emissions technologies.

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**Name:** Gena Gerard

**Sponsoring Organization:** Environmental Initiative

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**Location**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

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**Alternate Text for Visual:**

Reducing Wood Smoke: Protecting Our Health and Environment

|                          |                    |                          |                   |                          |                       |                          |                |
|--------------------------|--------------------|--------------------------|-------------------|--------------------------|-----------------------|--------------------------|----------------|
| <input type="checkbox"/> | Funding Priorities | <input type="checkbox"/> | Multiple Benefits | <input type="checkbox"/> | Outcomes              | <input type="checkbox"/> | Knowledge Base |
| <input type="checkbox"/> | Extent of Impact   | <input type="checkbox"/> | Innovation        | <input type="checkbox"/> | Scientific/Tech Basis | <input type="checkbox"/> | Urgency        |
| <input type="checkbox"/> | Capacity Readiness | <input type="checkbox"/> | Leverage          | <input type="checkbox"/> | TOTAL                 |                          |                |



**PROJECT TITLE: Reducing Wood Smoke: Protecting Our Health and Environment**

**I. PROJECT STATEMENT**

Problem: Minnesota has seen a steady increase in wood smoke pollution over the past decade, presenting a serious risk to air quality and public health.

- The fine particulate matter contained in wood smoke causes damage to the lungs, blood vessels, and heart.
- The EPA is particularly concerned about the health effects of smoke from residential wood heaters such as fireplaces and wood stoves, because the smoke they emit contains particulate matter and other toxins such as carbon monoxide, volatile organic compounds, black carbon, and benzene.
- This particulate matter has been linked to heart attacks, strokes, asthma, and premature death.
- The Minnesota Pollution Control Agency estimates that the cost of hospital admissions, emergency room visits, lost workdays, asthma, and heart attacks exceeds \$150 million statewide each year.

Source: The largest single source of this air pollution in Minnesota is residential wood burning.

- Residential wood burning accounts for 28% of total statewide fine particle emissions, according to the Minnesota Pollution Control Agency.
- Most of these emissions come from wood stoves, fireplaces, fire pits, and hydronic heaters.
- The region with the highest concentration of fine particle emissions per acre is the Twin Cities area.

Solution: Curb wood smoke pollution through proactive education and fireplace/wood stove changeouts.

- Environmental Initiative and American Lung Association in Minnesota propose to curb this especially toxic air pollution by (1) raising awareness through public education on wood burning and (2) replacing high-emissions fireplaces and wood stoves with low-emissions EPA-certified equipment.
- Our efforts to educate the public about wood burning impacts and options will diminish wood smoke pollution and reduce exposure to toxic air.
- Our work to replace 300 older fireplaces/wood stoves will reduce annual wood smoke emissions by an estimated 26,460 pounds (12 tons) of fine particle pollution annually, according to EPA calculations.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1: Reduce Wood Smoke Health Impacts Through Education and Outreach** **Budget: \$159,686**

The American Lung Association in Minnesota will increase awareness of the benefits of proper wood use and generate interest in replacing older wood burning equipment with cleaner alternatives. The project will utilize the trusted name of the American Lung Association to educate homeowners about the dangers of wood smoke to human health. Promoted benefits will include:

- Improved indoor air quality and health;
- Reduced outdoor emissions; and
- More effective and efficient heating.

The campaign will target current wood-burning households statewide, but place special attention on high-use areas, lower-income families, and those who use wood as a major source of heating. Educational efforts will include four public workshops in areas identified as priority locations, creation of a toolkit for use by community partners, exhibits at four home improvement expos, point-of-purchase materials for select vendors, media interviews, social media, guest editorials, and letters to editors. Project partners will also coordinate a statewide media campaign, which may include internet-based communications, radio in targeted areas outside the Twin Cities metro region, and print opportunities. This campaign will be purely educational in nature and will not promote or advertise any products or organizations.



**Environment and Natural Resources Trust Fund (ENRTF)**

**2015 Main Proposal**

**Project Title - Reducing Wood Smoke: Protecting Our Health and Environment**

| <b>Outcome</b>  | <b>Completion Date</b> |
|---|------------------------|
| 1. Educational materials and toolkit developed for use by partners and allies             | Dec. 31, 2015          |
| 2. Four public workshops in different regions and educational outreach at community level | Dec. 31, 2016          |
| 3. Targeted media campaign focused on key communities                                     | April 30, 2017         |
| 3. Exhibits at four expos/home improvement shows to expand education and awareness        | April 30, 2017         |

**Activity 2: Reduce air pollution by 12 tons/year with fireplace and wood stove replacements Budget: \$956,884**

Environmental Initiative is well known as a program implementer in the area of pollution prevention. Successes include the award-winning Project Green Fleet, a diesel emissions reduction program that has made Minnesota the first state in the county to retrofit all school buses with cleaner-burning equipment. Applying this knowledge and experience, we will implement an innovative program for replacing high-emissions fireplaces and other wood heaters with cleaner burning EPA-certified appliances. Features will include:

- A focus on high exposure areas such as the Twin Cities to achieve the greatest impact on human health
- Accessibility to all eligible participants through a scaled subsidy based on income and wood use
- A competitive RFP to vendors/installers for discounted EPA-certified fireplace and wood stove units
- Preference placed on natural gas appliances (in place of wood-burning) where gas service is available
- Marketing at the community level to engage eligible homeowners through direct outreach
- Administration of the equipment changeout process, working directly with vendors and end-users.

| <b>Outcome</b>  | <b>Completion Date</b> |
|---|------------------------|
| 1. Program structure developed using best practices research                          | Dec. 31, 2015          |
| 2. Community outreach strategy designed to promote participation in high-impact areas | Dec. 31, 2015          |
| 3. 300 wood heater replacements coordinated to reduce pollution by 12 tons/year       | June 30, 2017          |

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

- Receiving Funding – Environmental Initiative and American Lung Association in Minnesota
- In Kind Support – Unofficial commitments from Minnesota Pollution Control Agency, Minnesota Department of Health, Local Public Health Association, and University of Minnesota School of Public Health to provide staff time for this project through Clean Air Minnesota, a public-private partnership to improve air quality

**B. Project Impact and Long-Term Strategy**

In keeping with LCCMR’s Air Quality, Climate Change, and Renewable Energy funding priority, which promotes *innovative approaches to air quality improvement that reduce impacts on human health, environment, or natural resources*, this project promises lasting impact on air quality and public health as Minnesota confronts an upward trend in residential wood burning. Education creates the framework for long-term change, while new technologies provide heating alternatives that better protect Minnesota’s air and people. To prepare for this undertaking, we have secured private funding to launch a small-scale changeout pilot program in 2014. Planning includes research on model programs and best practices for education and outreach. This LCCMR proposal will expand our pilot program as a proof-of-concept opportunity, demonstrating scalability while having a real and measurable impact on air pollution. Our long-term strategy is to expand this effort into a full-scale statewide program. Demonstrating success at this level will position us to secure major funding, both private and public, in order to maximize emissions reductions and protect our air – one of our most important natural resources.

**C. Timeline Requirements**

The proposed project will be completed between July 1, 2015 and June 30, 2017. There are no timeline constraints or conditions required to complete this work.

## 2015 Detailed Project Budget

**Project Title - Reducing Wood Smoke: Protecting Our Health and Environment**

### IV. TOTAL ENRTF REQUEST BUDGET: 2 years

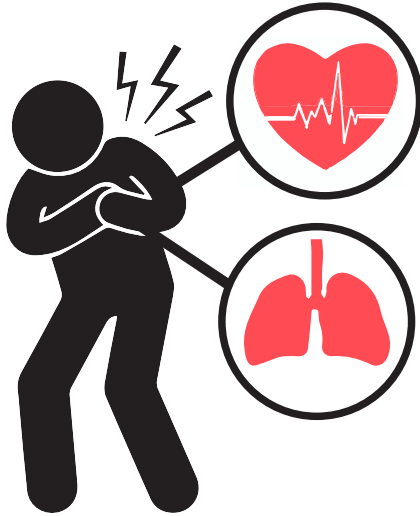
| <u>BUDGET ITEM</u>  | <u>AMOUNT</u>       |
|---|---------------------|
| <b>Personnel:</b>   |                     |
| <u>Environmental Initiative</u>   |                     |
| Gena Gerard, Project Director (81% Salary, 19% Benefits) 20% FTE for 2 years  | \$ 33,915           |
| Bjorn Olson, Senior Project Associate (75% Salary, 25% Benefits) 33% FTE for 2 years  | \$ 34,616           |
| To Be Hired, Senior Project Associate (75% Salary, 25% Benefits) 33% FTE for 2 years  | \$ 34,616           |
| Emily Franklin, Communications Director (79% Salary, 21% Benefits) 12% FTE for 2 years  | \$ 16,967           |
| <u>American Lung Association in Minnesota</u>   |                     |
| Robert Moffitt, Communications Director (65% salary, 35% benefits); 12% FTE for 2 years   | \$ 26,310           |
| Kelly Marczak, Environmental Programs Director (65% salary, 35% benefits); 6% FTE for 2 years   | \$ 13,923           |
| Jon Hunter, Environmental Programs Manager (65% salary, 35% benefits); 6% FTE for 2 years   | \$ 9,256            |
| Ruby Hocker, Environmental Programs Associate (65% salary, 35% benefits); 2.5% FTE for 2 years  | \$ 2,297            |
| <b>Contracts:</b>   |                     |
| <u>Environmental Initiative</u>   |                     |
| Contracts with wood heater appliance vendor(s) through competitive bid to replace older high-emissions units with EPA-certified low-emissions units: 300 replacements x \$2,750 average incentive for participating Minnesota residents (50-75% total cost based upon income and wood usage), with participating residents responsible for balance of expense.      | \$ 825,000          |
| <b>Travel:</b>  |                     |
| <u>Environmental Initiative</u>   |                     |
| Approximately 5,000 miles at \$.56 plus \$2,500 for lodging and meals for wood heater replacement implementation activities including meetings with vendors, partners, and end users  | \$ 5,300            |
| <u>American Lung Association in Minnesota</u>   |                     |
| Approximately 2,000 miles at \$.56 plus \$1,350 for lodging and meals during statewide travel related to outreach, earned media engagement, expos and public workshops.   | \$ 2,470            |
| <b>Additional Budget Items:</b>   |                     |
| <u>Environmental Initiative</u>   |                     |
| Printing for changeout program brochures and outreach materials   | \$ 4,000            |
| <u>American Lung Association in Minnesota</u>   |                     |
| Statewide educational media campaign. Multiple media types will be used to reach targeted audiences. Allocation may need to be adjusted as project develops to be most effective. Initial estimate:<br><ul style="list-style-type: none"> <li>• Print – 50%</li> <li>• Radio (outside Twin Cities) – 30%</li> <li>• Online and other opportunities – 20%</li> </ul> | \$ 100,000          |
| Site rental for wood smoke education events: exhibit spaces at 4 tradeshows/events and 4 workshop meeting rooms; free meeting spaces will be used whenever possible.  | \$ 4,000            |
| Informational display for wood smoke education at tradeshows/workshops  | \$ 1,000            |
| Web page development  | \$ 400              |
| Educational materials and partner toolkit for wood smoke education:<br><ul style="list-style-type: none"> <li>• 5000 wood smoke &amp; health handouts/brochures</li> <li>• 100 community toolkits</li> </ul>  | \$ 2,500            |
| <b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>  | <b>\$ 1,116,570</b> |

### V. OTHER FUNDS

| <u>SOURCE OF FUNDS</u>  | <u>AMOUNT</u> | <u>Status</u>  |
|---|---------------|----------------|
| <b>Other Non-State \$ To Be Applied To Project During Project Period:</b> Corporate Donors to be asked.   | \$ 250,000    | <i>Pending</i> |
| <b>Other State \$ To Be Applied To Project During Project Period:</b>   | N/A           | N/A            |
| <b>In-kind Services To Be Applied To Project During Project Period:</b> Indirect costs (rent, office expenses, management) - Environmental Initiative has a federally approved indirect cost rate of 33% - calculation is 33% of staff time plus 5 subcontracts of greater than \$25,000, per federal indirect costs rules. Funding by Flint Hills Resources. | \$ 85,000     | <i>Secured</i> |
| <b>Funding History: Pilot Project Planning and Implementation</b> - Funds provided by Flint Hills Resources and will be spent from 1/1/14 to 6/30/15.   | \$ 115,000    | <i>Secured</i> |
| <b>Remaining \$ From Current ENRTF Appropriation:</b>   | N/A           | N/A            |

## PROBLEM

Fine particle pollution causes serious heart and lung problems



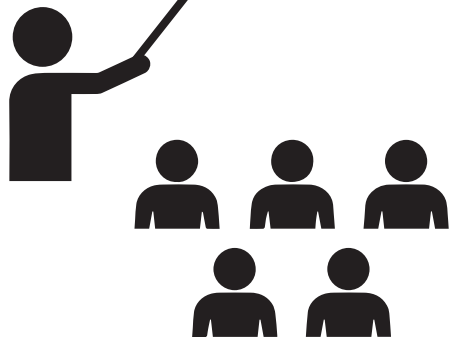
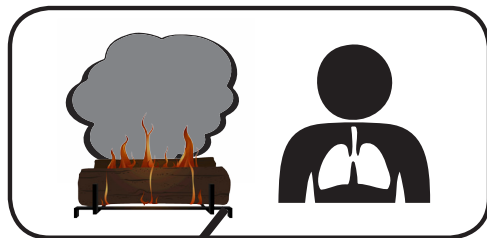
## SOURCE

Wood smoke accounts for 28% of fine particle pollution in Minnesota



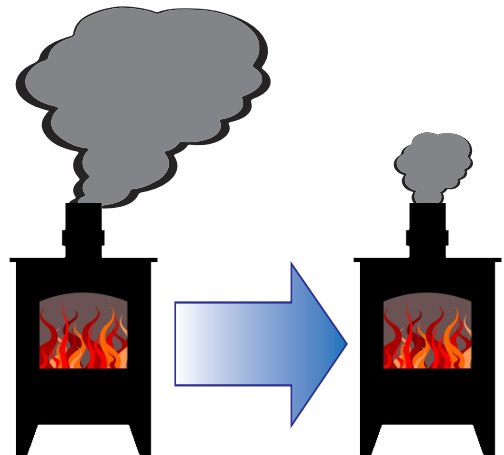
## SOLUTIONS

### EDUCATION & AWARENESS



### FIREPLACE REPLACEMENT

Remove 12 tons of fine particulate matter with cleaner burning equipment



## **Project Manager Qualification and Organization Description**

### **Gena Gerard, Director of Project Development - Environmental Initiative**

Gena Gerard, M.A., Director of Project Planning, is a certified project manager with over 20 years project management and program development experience in a variety of fields, including energy efficiency and conservation. As a market researcher and project manager with a variety of consulting firms, she supported utility Conservation Improvement Program (CIP) planning and evaluation activities by facilitating stakeholder group planning processes, stakeholder interviews for product design, process mapping, and logic model development to successfully achieve energy savings goals in support of the Next Generation Energy Act. She formerly founded and directed an award-winning 501c3 nonprofit organization in Minneapolis, MN. Gena now directs Clean Air Minnesota, a public-private partnership to improve air quality in Minnesota. She holds a Masters degree in Public Policy from the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota, along with a Mini-MBA in Nonprofit Management from the University of St. Thomas School of Business.

### **Kelly Marczak, Director of Environmental Programs - American Lung Association in Minnesota**

During Kelly Marczak's 15-year tenure, her duties have included implementing programs in three states to educate residents, businesses, and decision makers about the importance of air quality to health, and to initiate behavior change. Kelly's responsibilities include partnership and program development; staff management; budget oversight; and marketing. Examples of her program leadership include managing education and infrastructure activities through the Clean Air Choice® consumer education program; serving as the administrator for several alternative vehicle fuel infrastructure development programs, with grant funds secured from federal, state and private sources; and providing technical support to retail stations and vehicle owners on alternative fuels. She currently oversees five staff and assists with organizational management as part of the regional directors team.

### **Organizational description:**

**Environmental Initiative** is a 21-year-old 501(c)(3) nonprofit organization dedicated to building partnerships to develop collaborative solutions to Minnesota's environmental problems. Rather than focus on a dedicated set of environmental issues, the organization manages projects where partnership is needed most to realize a solution. This approach is combined with an internal practice to pursue projects that are well defined and where objectives are clear. This allows Environmental Initiative to be flexible, strategic, and receptive to community needs. Environmental Initiative's cross-sector, partnership-based approach directly improves the vitality of our community at large by creating tangible environmental, economic, and human health benefits.

**The American Lung Association in Minnesota (ALAMN)** is a nonprofit health charity headquartered in Saint Paul, Minnesota. Part of the American Lung Association of the Upper Midwest chapter, ALAMN has a strong environmental program that includes working closely with state and local governments, private companies, and other nonprofits to promote cleaner fleets and fuels in Minnesota, and a Health House program that focuses on indoor air quality and health. The organization is also active in a variety of clean air efforts, including Clean Air Minnesota, Drive Electric Minnesota, and the Twin Cities Clean Cities Coalition, which ALAMN coordinates.