

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

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**Project Title:**

**ENRTF ID: 113-F**

Reducing Garbage Burning and Dioxin Emissions Grant Program

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**Topic Area:** F. Outreach/Education/Training

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**Total Project Budget:** \$ 620,000

**Proposed Project Time Period for the Funding Requested:** 3 yrs. July 2013 - June 2016

**Other Non-State Funds:** \$ 0

**Summary:**

Reduce the amount of dioxin emissions and wildfires that result from the burning of household garbage through implementation of education, outreach activities and improved rural garbage and recycling collection sites.

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**Sponsoring Organization:** MN Pollution Control Agency

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**Location**

**Region:** NW, NE, Central, SW, SE

**County Name:** Red Lake, Redwood, Renville, Rice, Rock, Roseau, Sibley, St. Louis, Steele, Stevens, Swift, Todd, Traverse, Wabasha, Wadena, Waseca, Watonwan, Wilkin, Winona, Yellow Medicine

**City / Township:**

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<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"/>	Employment	<input type="checkbox"/>	TOTAL <input type="checkbox"/> %



# Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

## PROJECT TITLE: REDUCING GARBAGE BURNING AND DIOXIN EMISSIONS GRANT PROGRAM

### I. PROJECT STATEMENT:

Today, 227,992 households or 39 percent of all rural residents in Minnesota burn their garbage on-site primarily because convenient and affordable garbage/recycling drop-off collection services do not exist. Because of advances in chemistry and packaging, today's garbage contains plastics and other synthetics when burned at low temperatures (e.g. burn barrels) releases smoke that contains dioxin, a toxic and known carcinogen.

- According to the U.S. Environmental Protection Agency (EPA), backyard garbage burning is the largest source of dioxins released each year.
- One burn barrel can produce as much dioxin as a 200 ton per day waste combustor.
- Most of the dioxin produced from garbage burning enters our bodies through the food chain; specifically through meat, fish and dairy consumption.
- In addition to dioxin being a potent cancer promoter, non-cancer effects of exposures to dioxins in humans have shown to cause chloracne at high levels of exposure, and at lower levels may cause developmental and reproductive effects, changes immune response and hormonal effects.
- Larval fish exposed to dioxin exhibit reduced feeding, lethargy, unresponsiveness, and "head-up" swimming. Effects on birds include reduced egg hatching, embryo toxicity, deformities, and cardiovascular and brain malformations. Effects on mammals include hormone imbalance, immune suppression, liver impairment, cancer, fetal damage, and growth disorders
- For FY2011, Minnesota Department of Natural Resources (MN DNR) estimates that careless debris burning was responsible for 156 wildfires (33% of total) at cost of \$4,193,351.97.

From 2007 to 2009, the Minnesota Pollution Control Agency (MPCA) initiated a statewide pilot Burn Barrel Reduction Campaign providing grant funds to assist counties in rural Minnesota in implementing education, outreach and garbage/recycling drop-off collection sites. Those efforts resulted in:

- A 12 percent reduction in the number of households (30,657) burning garbage and 29,280 tons of garbage and recyclables collected and safely processed or disposed of in a landfill.
- Convenient garbage/recycling drop-off services within a 3-mile radius at costs ranging from \$1.54 to \$3.00 per month compared to individual waste hauler service averaging \$41.00 per month.

The MPCA is seeking funding to expand its pilot campaign to reduce the amount of dioxins and other pollutants released each year from the burning of household waste and the number of wild fires started annually. The MPCA will issue a competitive Request for Proposals (RFP) providing counties and regional authorities grants to:

- Educate and inform rural residents on the negative consequences of burning garbage;
- Establish convenient but affordable rural garbage/recycling drop-off collection sites;
- Reduce the cost of rural garbage collection compared to existing practices;
- Increase the amount of garbage and recyclables collected; and
- Reduce the number of households burning garbage and the amount of dioxins released

Under this campaign, the MPCA will issue two (2) RFPs to develop and implement activities found within the "Description of Project Activities." RFP 1 would seek competitive proposals and select 24 counties to receive \$25,000 each to implement those tasks described in Activities 1 and 2 under a three (3) year agreement. RFP 2 would seek proposals from a private contractor to evaluate the overall success of the statewide campaign.

### II. DESCRIPTION OF PROJECT ACTIVITIES

#### Activity 1: Education & Outreach

**Budget: \$120,000.00**

To create efficiency and economy, RFP 1 will encourage counties, outside the metro area, to collectively coordinate the implementation of a regional education and outreach campaign on the negative effects of backyard garbage burning and alternative disposal options. The education and outreach media could



# Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

include a mixture of press releases, print ad, brochures, radio spots, school education programs, farm events or forums, etc. from the MPCA’s “Burn Barrel Reduction” webpage.

Outcome	Completion Date
1. Measure attitude and disposal behavior changes through surveys at County Fairs.	October 2015

**Activity 2: Garbage & Recycling Collection Drop-off Site Infrastructure Budget: \$ 480,000.00**  
RFP 1 will also facilitate the development of convenient and affordable rural garbage/recycling drop-off collection sites. Counties will submit competitive proposals to establish new drop-off sites for the collection of garbage and recyclables and/or expand existing recycling sites to accept garbage from residents and cover site development, signage, containers and collection costs. These initial expenses will be covered in the first and second year of the grant agreements. In the third year, residents and counties will pay expenses with local funding sources.

Outcome	Completion Date
1. Tons of garbage and recyclables collected at each site	June 2016
3. Monthly and annual collection service costs per household	June 2016
5. Pounds of dioxin reduced	June 2016

**Activity 3: Campaign Evaluation Budget: \$20,000.00**  
The Agency proposes to evaluate the overall effectiveness of those activities identified in Activities 1 and 2 to determine behavior changes among rural residents with respect to garbage burning. To that end, the MPCA will issue RFP 2 seeking proposals from qualified contractors to develop a questionnaire, conduct random telephone interviews in each of the five (5) MPCA regions outside the Metro Area and generate a report and analysis of the findings.

Outcome	Completion Date
1. Number of households no longer burning garbage by each region.	June 2016
2. Demographic characteristics (age, sex, household size, education) by region.	June 2016
3. Knowledge level of health and environmental consequences of burning by region.	June 2016
4. Attitude changes on garbage burning by region.	June 2016
5. Availability and costs of disposal services by region.	June 2016
6. Pounds of dioxin reduced.	June 2016

### III. PROJECT STRATEGY

#### A. Project Team/Partners

The MPCA proposes to award grant funds through a competitive RFP process to solid waste agencies and counties to implement tasks described in Activities 1 and 2. The Agency will issue a second RFP seeking qualified contractor to perform tasks under Activity 3.

#### B. Timeline Requirements:

- MPCA develops & issues RFP 1 (Activities 1&2): July 2013 – August 2013
- MPCA reviews proposals and notifies grantees: September 2013
- Grantee develops and implements tasks under Activities 1& 2: October 2013 – June 2016
- Grantee submits periodic and final reports for review with invoices for payment: October 2013 – June 2016
- MPCA develops & issues RFP 2 (Activity 3): October 2015
- MPCA reviews proposals (Activity 3) and awards contract: January 2016
- Statewide survey developed & implemented: April 2016
- Analysis & final report on findings submitted: June 2016

#### C. Long Term Strategy & Future Funding Needs

This proposal is part of the MPCA’s long term commitment within its Strategic Plan Goal: L1 to reduce the number of households burning garbage on-site and resulting dioxins and wildfires by 75 percent. To reach this goal, the MPCA will need resources to educate, inform and create convenient but affordable waste disposal and recycling services for rural residents.

## 2012-2013 Detailed Project Budget

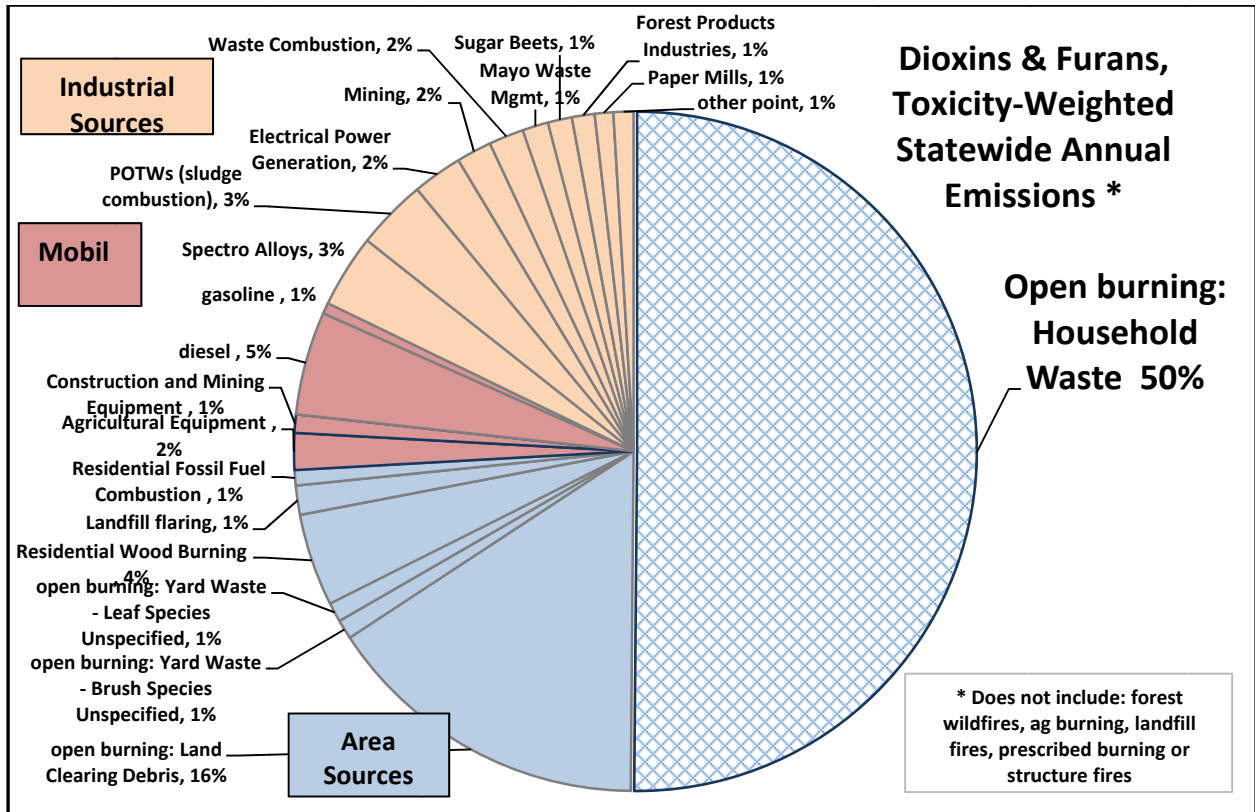
**Project Title:** Reducing Garbage Burning and Dioxin Emission Grant Program

### IV. TOTAL ENRTF REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b> The MPCA will provide the staff necessary to manage and oversee the completion of this project. Specifically, regional staff will assist Henry Fisher, Project Manager in monitoring the implementation of the "pilot" campaign to include providing assistance to grantees in evaluating outcomes and developing required periodic reports.	0
<b>Contracts:</b> The MPCA will issue RFP 2 to select a research and statistical analysis contractor to develop a questionnaire, conduct a statewide random telephone interviews and analysis to determine behavior changes among rural residents, farmers and cabin owners with respect to garbage burning.	\$20,000
<b>Additional Budget Items:</b> The MPCA will issue a competitive RFP 1 providing "pass-thru-grants" to counties, not to exceed \$25,000.00 per award, to implement education, outreach activities and establish convenient but affordable garbage collection and recycling drop-off sites. A 20% match and a 3 year contract agreement will be required per award.	\$600,000.00
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 620,000</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>In-kind Services During Project Period:</b> Counties in-kind matching funds required at 20% = \$150,000.00; MPCA matching funds at \$140,000.64 (personnel) to manage project over the 3 years.	\$290,000.64	Pending
<b>Funding History: *</b> <p>In 2005, the MPCA initiated a base-line study (e.g. Phase I Burn Barrel Study) to determine the severity of the backyard garbage burning problem, where and why it occurs, and what efforts would help change the behavior. That effort found that: 45% of rural residents burn their garbage; convenience, habit and price ranked as primary drivers for burning; and adequate disposal options such as the availability of drop-off sites and or their distance were issues in some areas.</p> <p>In 2005, the MPCA established a "Burn Barrel Reduction" web page providing the public and others information on the health and environment problems caused by backyard garbage burning while also providing some tools to educate and inform others of options that may be taken to abate the practice.</p> <p>From 2007-2009, the MPCA provided grants thru its "pilot" Burn Barrel Reduction Campaign to 24 counties throughout the State for the purpose of educating, informing and establishing garbage/recycling collection infrastructure for rural residents.</p> <p>To gage campaign success, the MPCA implemented a statewide follow-up study (Phase II Burn Barrel Study) in 2010 to determine the effectiveness of the education, outreach and garbage drop-off collection infrastructure programs. The study found that garbage burning fell 12% statewide or 30,657 households, farmers burning garbage had fallen 17% and 47% of survey respondents either reduced or changed their disposal practice because of information they had seen or heard.</p> <p>*All projects above were funded through the MPCA's Environmental Fund (e.g. tax collected on garbage disposal). The total funds expended, (excluding staff technical assistance) from 2005 to 2010 = \$374,000.</p>	<p>\$12,000</p> <p>\$200,000</p> <p>\$150,000</p> <p>\$12,000</p> <p><b>\$374,000</b></p>	



### Redwood County Township Garbage/Recycling Collection Drop-off Site



## **Project Manager Qualifications/Organization Description**

Henry Fisher is a principal planner with over 12 years experience in various Minnesota Pollution Control Agency solid waste management programs. Among his duties, he is responsible for administrating the Agency's statewide "Burn Barrel Reduction Initiative that will reduce the number of households who burn their waste on-site by 75 percent in accordance with the MPCA Strategic Plan. Past efforts have included management of the statewide Phase II Burn Barrel Study in 2010 to determine whether backyard garbage burning had decreased, increased or remained the same compared to a baseline study completed in 2005. That effort involved securing a contractor to perform those services, monitoring contractor performance and coordinating the review and analysis of the study results with a "work group" consisting of members the Minnesota Solid Waste Administrators and others in developing a comprehensive set of recommendations for potential action in meeting the Agency's Strategic Plan. Prior to this evaluation, he assisted in coordinating the implementation of the MPCA's "pilot" Burn Barrel Reduction Campaign that provided counties grant funds to educate, inform and implement garbage/recycling drop-off collection services for rural residents. He is also responsible for maintaining and expanding the Agency's "Burn Barrel/Backyard Garbage Burning" web site providing the public new information and tools to assist them in developing and implementing successful garbage burning abatement initiatives. He can be reached at [henry.fisher@state.mn.us](mailto:henry.fisher@state.mn.us) or at the MPCA, 525 Lake Avenue, South, Suite 400, Duluth, MN 55802 and (218) 302-6630.