

Request for Proposals
Residential Wood Use Survey

Northeast States for Coordinated Air Use Management

RFP No. NESCAUM-20170518

Date: June 12, 2017

Due: July 14, 2017

The Northeast States for Coordinated Air Use Management (NESCAUM) solicits proposals from qualified organizations to finalize and implement a survey to assess the number of residential wood heating devices in New England and identify typical use patterns for those appliances.

NESCAUM is a nonprofit association consisting of the air quality control divisions of the eight northeast states: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NESCAUM's mission is to provide scientific, technical, analytical, and policy support to the air quality and climate programs of the eight Northeast states. This residential wood heating survey will be focused on six of the eight NESCAUM states: Connecticut, Rhode Island, Massachusetts, Maine, New Hampshire and Vermont.

1. Background

Emissions inventories, such as EPA's National Emissions Inventory, suggest that residential wood burning makes up a significant portion of direct fine particulate emissions from combustion processes throughout New England. However, significant questions remain regarding the accuracy of county-level estimates of the type and number of wood burning appliances used and the amount of wood burned in these appliances.

Survey results are needed to better estimate emissions from residential wood burning on a county basis. Most states in New England rely upon information developed by federal agencies using census data and other federal data sources to estimate the amount of wood heating appliances in the region and the amount of wood burned in those appliances. Analysis of residential wood burning patterns performed by the State of Vermont indicates that the federal information may not be representative of actual use patterns. Therefore, under this effort, NESCAUM seeks proposals to finalize and implement a survey tool to:

- 1) Identify the types of wood heating appliances used;
- 2) Estimate the total amount of wood burned for residential wood heating during a typical year;
- 3) Characterize the purpose of the wood burning, whether: (a) for pleasure/aesthetic reasons, (b) as the sole or primary heating source, or (c) as supplemental heating (to heat a room or to heat only on the coldest days).

2. Scope of Analysis

NESCAUM is leading a state workgroup that includes representation from each of the New England states. The workgroup has drafted an initial survey tool (included in Attachment A) to guide the efforts of the selected contractor. NESCAUM anticipates that the selected contractor will review the draft initial survey tool, develop recommendations to revise the survey tool, and develop deployment recommendations for the survey (e.g., phone, mail, internet delivery). Once the workgroup has reviewed and accepted the Contractor's survey tool and deployment plan, the Contractor will be responsible for deploying the survey and providing analysis of results. The Contractor will also provide the workgroup with a draft report to document the final survey tool, the methods used in its implementation, the data reduction and analysis methodology, and the final results. The workgroup will provide review and comment on the draft report, and the Contractor will then provide a Final Report based on any comments received.

Anticipated Project Timeline

Estimated Schedule for Completion

- July 2017: Selection and securing Contractor services
- August – September 2017: Draft survey redesign & piloting
- October 2017: Deploy survey
- January 2018: Data management and analysis
- February 2018: Report preparation/completion

3. Proposal Content

Proposals should be limited to 20 pages (i.e., 10 double-sided sheets of paper) using 12 point font size with a margin of 1” on all four sides, and should address the following:

- **Identify Proposal** – Indicate that your organization is submitting a proposal for the NESCAUM Residential Wood Use Survey RFP in the title of the electronic submission.
- **Contact Information** – Include the name and address of the organization submitting the proposal. Include the name, title, phone number, and email address for the principal point of contact on the proposal. If partnering with another organization, include the same information for that organization and principal contact and identify which contractor will be the prime contractor. If the principal points of contact for performing the work (should a contract be awarded) are different from the points of contact for the proposal, provide the same information for these contacts.
- **Statement of Qualifications** – State in a few sentences why you believe your organization is qualified to provide the requested services.
- **Experience** – Describe the experience of your organization in completing similar projects.
- **Technical Approach**
 - Describe in detail a proposed approach to develop and deploy the survey tool.
 - Summarize work to be done (proposed approach and deliverables). Include information, if applicable, about any work already completed or underway, funded by another source, that could satisfy NESCAUM’s requirements including key project aspects such as:
 - Sample design
 - Proposed approach for delivery of the survey tool
 - Plans for data Quality Assurance and preparing raw survey responses for analysis (handling missing values, identifying outliers, etc.)
 - Recommendations to improve survey response rates and representativeness
 - Statistical methods to characterize margins of error and levels of confidence based on the sampling design and weighting methods
- **Schedule** – Provide a schedule for completing the project, showing what support you will need from participating agencies, when products will be produced, review periods for draft documents, etc.
- **Personnel** – Identify personnel you will assign to work on this project, their experience with similar projects (e.g., relevant publications should be identified), and their expertise.

- **Pricing** – Include detailed estimates of costs: personnel, indirect, overhead, and other project costs. Payment will be linked to completion of tasks and submittal of deliverables. Total costs are not to exceed \$40,000.
- **References** – Provide three references whom we can contact regarding previous projects.

4. Deadline for Proposals

All proposals are due by no later than 5:00 p.m. Eastern Time on July 14, 2017. Proposals will only be accepted via email with an electronic attachment. Proposals received after the deadline will not be considered.

Electronically submitted proposals should be sent to Ms. Lisa Rector: lrector@nescaum.org. The format of the attachment must be either portable data format (pdf) or Microsoft Word (doc or docx).

5. Communications

Communications regarding this RFP should be directed to Ms. Lisa Rector by telephone at (802) 899-5306 or by email at lrector@nescaum.org.

6. Evaluation Criteria

NESCAUM will use whatever procedure it deems appropriate for evaluating proposals, including the possibility of requesting additional information from one or more proposers during the evaluation period. At a minimum, NESCAUM will consider the following factors in evaluating proposals:

- Proposer's ability to supply the specified services
- Efficient use of resources and ability to build on this effort in the future
- Total cost of proposed services
- Qualifications and experience of key personnel

7. No Obligation to Award a Contract

NESCAUM has no obligation to award a contract to any organization responding to this RFP. If NESCAUM determines, in its sole discretion, that none of the proposals demonstrates sufficient capability to provide the necessary technical services, NESCAUM reserves the right to re-issue this RFP or a different RFP for the same purpose. Further, NESCAUM reserves the right to award a contract for only a portion of the work originally proposed.

8. Disclosure of Proposal Contents

NESCAUM generally does not consider the contents of any proposal to be proprietary or confidential. As such, NESCAUM reserves the right, at its sole discretion, to disclose or withhold from disclosure, the contents of any proposal submitted in response to this RFP.

9. Conflict of Interest

Based on the proposal contents, NESCAUM may exercise its discretion to disqualify an organization from further consideration to be the project technical consultant if, in NESCAUM's judgment, there is a conflict of interest arising from business relationships of the proposing organization.

10. Timing

The project should be completed within six months of initiating the contract. It is anticipated that the project will begin around August 2017 and end no later than February 28, 2018.

11. Payment

Bids must identify costs per task. The organization will be paid for work completed and deliverables received (e.g., sample analysis report delivery), not on the basis of hours worked. Payment of the final 10% of the contract will not be made until all of the agreed products are delivered.

12. Other Information

All information and data developed under this contract will be in the public domain unless otherwise specified in the proposal and contract.

Attachment A
Draft Survey Tool

Introduction

You have been randomly selected to participate in a survey to help understand how much wood is being used at your home and how that wood is being used. Wood is a renewable local energy source that is used for a variety of activities ranging from primary heating of the home to recreational and aesthetic burning. This survey will be used to help manage our forests and better assess the role wood plays in displacing fossil fuels such as oil and natural gas. This survey will be used to refine estimates of how many homes use wood heating and the amount of wood people use for both heating and recreational burning. Even if you do not have wood-burning equipment or did not burn any firewood, fireplace logs or wood pellets, please complete the appropriate portions of the survey; that information is also important.

Survey terms

The survey asks about the **wood-burning appliance** you use. **Wood-burning appliance** includes wood-burning fireplaces, fireplace inserts, wood stoves, wood furnaces, wood boilers, masonry heaters, outdoor fire pits, chimeneas, etc.

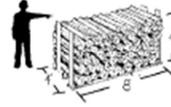
The survey also asks about how much you burn at your **primary residence** (your main home), your **secondary residence** (second home, cabin, trailer or other vacation property) or at a campsite. If you have more than one secondary residence, please consider only the most frequently used secondary residence.

Estimating Wood Use

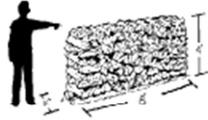
If you use cordwood, there are questions about the amount of cordwood used in a typical year. The information below can help you estimate the amount you use:

Estimating how much firewood you use

A **full cord** is a large amount of wood. It measures 4 feet high by 4 feet wide by eight feet long (4' x 4' x 8') and has a volume of 128 cubic feet.

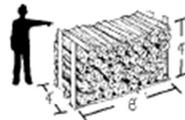


A **face cord** of wood is four feet high by eight feet long and is as wide as the individual firewood pieces, but averages 16 inches wide. A 16-inch wide face cord (sometimes called a **fireplace cord**) is equal to one-third of a full cord.



Face cord (16")

X 3
times three equals



One full cord

Two full-size pick-up truck loads (8 foot box) equals one full cord, whether the wood is stacked carefully so it is about level with the truck box sides, or is thrown into the truck box with the top of the pile about as high as the cab.



Full-size pick-up truck (8')

X 2
times two equals



One full cord

Four compact pick-up truckloads (6 foot box) equals one full cord of wood, whether the wood is stacked carefully and about level with the truck box sides or thrown into the truck box with the top of the pile about as high as the cab.



Compact pick-up truck (6')

X 4
times four equals



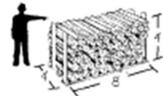
One full cord

64 bags/bundles of firewood that measure about one foot by one foot by two feet (1' x 1' x 2') equals one full cord.



Bag or bundle (1' x 1' x 2')

X 64
times sixty four equals



One full cord

Intro Questions

1. What is the zip code for your primary residence?
2. Do you burn wood for heating, camping or aesthetic purposes?
 - Yes – goes to question 3
 - No – goes to section G
3. Please check the type of appliance(s) you have in your primary residence (insert photos to help id correct appliance types) – allow to check more than one
 - a. Conventional fireplaces – direct to Section A
 - b. Fireplace cordwood inserts – direct to Section B
 - c. Fireplace pellet inserts – direct to Section C
 - d. Cordwood stoves – direct to Section B
 - e. Pellet stoves – direct to Section C
 - f. Cordwood boiler/furnaces – direct to Section D
 - g. Pellet boiler/furnaces – direct to Section D
 - h. Campfires/campsites - direct to Section E
 - i. Outdoor fire ring/chimenea/fire pits – direct to Section F

Section A: Conventional Fireplaces

A conventional fireplace:

- Is mainly for decorative use rather than for primary for heating;
- May or may not have doors;
- Includes fireplaces known as “heatilators”;
- Includes fireplaces with tubular grates or other devices intended to increase heat flow;
- Includes freestanding fireplaces.

Q1: How many conventional fireplaces are in your primary residence?

__#

Q2: Do you use this equipment mainly for:

__ Pleasure/Aesthetics

__ Heating

Q3: Please indicate what type of wood and the amount of each type that you typically use over a year. Please check all that apply and indicate an approximate amount for each in the space provided:

__ None. If none, go to Q5

__ Cordwood -- How many cords? __ (indicate fractions of full cords, if necessary)

__ Store bought bundles of wood -- How many bundles? __

__ Pressed logs (such as Duraflame) -- How many? __

__ Other (please specify) _____

Q4: Please check which months you typically use your fireplace:

__ Jan

__ Feb

__ Mar

__ Apr

__ May

__ Jun

__ Jul

__ Aug

__ Sep

__ Oct

__ Nov

__ Dec

Q5: During the months you use your fireplace, approximately how many days per month is it used?

__ less than five days per month

__ 5-15 days per month

__ more than 15 days per month

Section B: Wood Stoves and Fireplace Inserts

Wood stoves are freestanding space heaters often used to heat a specific room or zone of a house.

Fireplace Inserts are space heaters designed to fit into an existing fireplace opening.

Woodstoves and fireplace inserts have either conventional or EPA-certified air pollution control technology. Most conventional wood stoves and inserts were sold or installed prior to 1989, whereas most EPA-certified wood stoves and inserts were sold or installed beginning in 1989.

Q6: How many wood stoves and/or fireplace inserts are in your primary (or secondary) residence?

__#

Q7: Do you use this equipment mainly for:

Pleasure/aesthetics

Primary source of heat

Back-up, room heating or supplemental heating

Q8: Please check which months you typically use your wood stove or fireplace insert:

Jan Feb Mar Apr May Jun

Jul Aug Sep Oct Nov Dec

Q9: During the months you use your stove/insert, approximately how many days per month is it used?

less than five days per month

5-15 days per month

more than 15 days per month

Q10. Please fill out the table below for each wood stove and/or fireplace insert you have at your primary (or secondary) residence. Estimate the amount of fuel burned for each device. Use fractions of full cords if necessary.

Manufacturer/Model	Is your device EPA certified?			How much wood do you typically burn each year in cords?	How long have you owned the stove or insert?
	Yes	No	Don't know		

Section C: Pellet stoves

Pellet stoves burn small compressed fuels, typically using a hopper to hold the fuel. This enables pellet stoves to burn for a long time without reloading. They rely on electricity to release pellets into the combustion chamber and to operate fans. Pellets can be made from a variety of biomass products such as wood, corn or pits.

Q11: How many pellet stoves are in your primary (or secondary) residence?
 ___#

Q12: Do you use this equipment mainly for:
 ___ Pleasure/aesthetics
 ___ Primary source of heat
 ___ Back-up, room heating or supplemental heating

Q13: What type of pellets do you burn?
 ___ wood ___ corn ___ other: describe.....

Q14: Please check which months you typically use your pellet stove:
 ___ Jan ___ Feb ___ Mar ___ Apr ___ May ___ Jun
 ___ Jul ___ Aug ___ Sep ___ Oct ___ Nov ___ Dec

Q15: During the months you use your pellet stove, approximately how many days per month is it used?
 ___ less than five days per month
 ___ 5-15 days per month
 ___ more than 15 days per month

Q16: Please fill out the table below for each pellet stove you have at your primary (or secondary) residence:

Manufacturer/Model	Is your device EPA Certified?			How long have you owned your pellet stove?	Do you buy pellets in bulk or bags?	Amount of pellets used (please specify tons or bags)?	PFI ¹ certified pellets (yes/no)?
	Yes	No	Don't Know				

** Pellets are usually sold in 40 lb bags; 50 bags = 1 ton

¹ Pellet Fuel Institute (PFI) has developed a voluntary pellet fuel certification program.

Section D: Wood burning furnace or boiler

Furnaces or Boilers provide central heating and can be controlled with thermostats. Indoor wood furnaces are usually installed in basements or utility rooms. They heat air directly and are connected to ducts that move warmed air around the building. Wood boilers heat water that moves through pipes to where the heat is used. Boilers can be located inside or outside a house. "EPA-qualified" or "EPA-certified" appliances are typically labeled "Qualified at EPA" or "EPA Certified" on the permanent label.

Q17: How many wood furnaces or boilers are in your primary (or secondary) residence?
___#

Q18: My wood furnace or boiler is used to (check all that apply):
___ Heat my house or other buildings (e.g., garage, workshop, etc.)
___ Provide hot water
___ Heat water for my swimming pool or hot tub
___ Other: _____

Q19: Does your wood furnace or boiler distribute heat via a:
___ forced hot water system
___ forced hot air system
___ other

Q20: Is your wood furnace or boiler located:
___ in your house
___ in your garage or outbuilding
___ outside

Q21: What is the rated heat output of the boiler or furnace, if known, in BTU per hour:

Q22: Does your wood furnace or boiler burn pellets or cordwood?
Pick one: Cordwood/Pellet/Multi-fuel

Q:22A: For cordwood units
Estimate the amount of fuel burned for each device.
___ None (check, and go to Q22B)
___ Cords of wood (indicate fractions of full cords if necessary)
___ # of logs (indicate avg. length)

Q22B: For pellet units - How many pellets do you typically use in a year in your furnace or boiler?
___ Tons of pellets (pellets are usually sold in 40 lb bags; 50 bags = 1 ton)

Q22C: For multi-fuel units - What types of fuels do you burn in your appliance?

Please estimate the amount of these fuels typically used:

Q23: Please check which months you typically use your furnace/boiler:

Jan Feb Mar Apr May Jun
 Jul Aug Sep Oct Nov Dec

Q24: How long have you owned this appliance?

Q25: The device is:

EPA qualified/certified
 Not EPA qualified/uncertified
 Not sure

Q26: Brand or model: _____

Section E: Outdoor wood burning fire pits, Chimeneas, fire rings or campfires

- Can be above the ground or dug into the ground
- Are located outside the house
- Please answer only for those units that burn wood

Q27: Please check all the types of outdoor wood burning appliances you use at your primary (or secondary) residence:

- Chimnea
 Fire ring
 Fire pits
 Other, please describe: _____

Q28: If you used a fire pit, chimenea or burned wood outdoors, please indicate the types and amount of wood or biomass you burn in a typical year. For any of the following that apply, please put an estimated amount in the space provided:

- Full cords
 Face cords
 Bundles of wood
 Number of wax logs such as Duraflame
 Number of wood pallets
 Full cords of slabs (the round parts of a log cut off to make milled wood such as boards)
 Yard waste (sticks, twigs, leaves)
 Other (please specify) _____

Q29: Please check which months you typically use outdoor wood burning appliances:

- Jan Feb Mar Apr May Jun
 Jul Aug Sep Oct Nov Dec

Q30. In the months you use outdoor wood burning appliances, how many times do you typically use them per month:

- 1-5 times per month
 6-10 times per month
 more than 10 times per month

Q31. Do you ever build fires at other locations such as beaches or campgrounds?

- Yes, move to Q32
 No, move to next section

Q32. Please estimate the numbers of times you have a beach fire or campfire in a typical year:

- Less than five times a year
 5-10 times a year

___ 11-20 times a year
___ more than 20 times a year

Section F. Second Homes

Q33. Do you own a second home?

If yes, move to next question

If no, move to demographics section

Q34. What is the zip code for your second home?

Q35. Please check the type of appliance(s) you have in secondary home (insert photos to help id correct appliance types) – allow to check more than one

- Conventional fireplaces – direct to Section A
- Fireplace cordwood insert – direct to Section B
- Fireplace pellet insert – direct to Section C
- Cordwood stove – direct to Section B
- Pellet stove – direct to Section C
- Cordwood boiler/furnace – direct to Section D
- Pellet boiler/furnace – direct to Section D
- Campfires/campsites - direct to Section E
- Outdoor fire ring/chimney/fire pit – direct to Section F
- My second home doesn't have any wood burning activities – direct to demographics section.

Section F: Other

Q36. Are there any other appliances not pictured in the questions above that burn wood in your primary residence, or secondary residence, cabin, or trailer? If so, please describe them and tell us how much wood (in cords) you typically use in the devices.

Q37. For your primary residence, please indicate what other fuels you use for heating:

Electricity

Natural gas

Oil

Propane

Other: please specify _____

Q38. What is the approximate square footage of your primary residence? _____

Section H: Demographics

- Q39: Which of the following best describes your primary residence?
- Detached single family home
 - Mobile home
 - Duplex (two units)
 - Multi-resident building (3-5 families)
 - Apartment
- Q40: If you own a second home, which of the following best describes that residence?
- Detached single family home
 - Mobile home
 - Duplex (two units)
 - Multi-resident building (3-5 families)
 - Apartment
 - Cabin or camp
- Q43: Please provide the number of people in the following age ranges who live in your primary home:
- Under the age of 18
 - 19-35
 - 35-50
 - 51-65
 - Over 65
- Q44: Please check the total household income that represents the annual gross income of all the people who live in your primary residence.
- Less than \$25,000
 - \$25,001 to \$60,000
 - \$60,001 - \$100,000
 - Greater than \$100,000

Thank you for taking the time to complete this survey!