

UVM Wood Heating Consumption Survey - Mad River Valley

The University of Vermont is conducting a survey of households in the towns of Fayston, Moretown, Waitsfield and Warren in the Mad River Valley to better understand the demand for wood to heat homes. If you are 18 or older, you are invited to participate in this survey.

You can help support a better understanding of the firewood and wood pellet consumption in these towns by completing this questionnaire. Please complete the questionnaire even if you do NOT heat with wood products. Your answers are important to us!

The results of this survey will be used to inform local community efforts relating to wood heating in the Mad River Valley. All responses will be confidential. Your response is important to help us support wood energy development that best meets the needs of you and your community.

Please make sure that the person in your household who is most familiar with getting your household's wood completes this questionnaire. Please answer the questions with regard to your primary residence. Some demographic information is requested at the end. You will need 5 to 15 minutes to complete the survey.

Thank you for taking the time to answer these questions.

If you have any questions or would like to learn more about wood heating projects in your community, please contact:

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Firewood

1. Did you purchase or otherwise acquire firewood for personal use any time during 2008 (January through December 2008)?

_____ Yes _____ No **(if no, skip to Question 14)**

2. How did you get the firewood? *(check all that apply)*

- ___ 1. Purchased
- ___ 2. Harvested on my property
- ___ 3. Harvested from another property
- ___ 4. Bartered
- ___ 5. Other _____ (please describe)

3. How many cords did you get? (1 cord = 4x4x8 feet or 128 cubic feet)

_____ cords _____ less than one cord _____ do not know

4. How many of these cords were dry wood? _____ cord(s) _____ do not know

5. How many of these cords were green wood? _____ cord(s) _____ do not know
6. Total spent on firewood in 2008 \$ _____ do not know
7. If you purchased dry wood, how much did you pay per cord?
\$ _____/cord for dry wood _____ do not know _____ not applicable
8. If you purchased green wood, how much did you pay per cord?
\$ _____/cord for green wood _____ do not know _____ not applicable
9. When in 2008 was the firewood delivered/brought to your home? (*circle all that apply*)
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

10. How satisfied were you with your firewood this year overall? (*circle*)

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
a. Dryness	1	2	3	4	5
b. Size	1	2	3	4	5
c. Composition of wood (e.g. oak, birch, maple)	1	2	3	4	5
d. Quantity received relative to amount ordered	1	2	3	4	5
e. On-time delivery	1	2	3	4	5

Comments:

11. Do you know the property from where your firewood came?
_____yes _____no _____do not know (**if no, skip to Question 13**)
12. If yes, was the property within 50 miles of where you live?
_____yes _____no _____do not know
13. Who did you buy your firewood from?
a. Name of dealer(s) _____
b. Town or phone number of dealer(s) _____
c. _____ did not buy it d. _____ do not know name of dealer(s)
14. Are you using firewood to heat your residence this winter (2008-2009)?
_____yes _____no (**if no, skip to Question 25**)
15. What role does firewood play in heating your residence this year?
_____ 1. Primary source of heating
_____ 2. Supplemental source of heating
_____ 3. Not for heating, use for sugaring/maple syrup
_____ 4. Not for heating, other _____
_____ 5. Other _____

16. What is the approximate area you are heating in square feet?
 _____ square feet _____ do not know _____ not applicable
17. What kind of appliance(s) do you use to burn your wood? (check all that apply)
 _____ woodstove _____ indoor furnace _____ outdoor boiler _____ other (describe)
18. When was your appliance manufactured? (Appliances built after July 1, 1990 are more efficient and comply with stricter environmental regulations)
 _____ Before Jul 1, 1990 _____ After Jul 1, 1990 _____ do not know
19. What measures do you take to increase or monitor the efficiency of your appliance?
- _____ 1. Burn seasoned wood. As much as 50% of the weight of green wood can be water, which has to be burned off before heat can be released.
 - _____ 2. Use small, hot fires. This burns volatile gases more quickly, producing fewer safety hazards and air quality problems than a fire that is over-damped.
 - _____ 3. Monitor temperature of the gases leaving the stove. Using a stack thermometer will indicate whether you are operating at the range for most efficiency and least pollution: about 300 to 400°F.
 - _____ 4. Remove excess ashes. Too much ash can cut down on the oxygen needed for woodburning.
 - _____ 5. Tighten up the house. Insulation, weather stripping, storm windows and caulking can all reduce the amount of wood required to heat your home.
 - _____ 6. Look outside to check emissions. The absence of smoke indicates that your stove is burning cleanly and effectively.
 - _____ 7. Regularly inspect stove and chimney. Look for warping, check the baffle to make sure there are no gaps.
20. Did you get a different quantity of firewood for heating this year compared to last year?
 _____ more _____ less _____ same **(if same, skip to Question 23)**
21. If you acquired more firewood this year, why? (*check all that apply*)
- _____ 1. Price of oil/gas
 - _____ 2. Desire to use less oil/gas for reasons other than cost
 - _____ 3. Different residence
 - _____ 4. Different woodstove/furnace
 - _____ 5. Desire for more energy security
 - _____ 6. Desire to use local energy source
 - _____ 7. Did not acquire more firewood
 - _____ 8. Other _____
22. If you acquired less firewood this year, why? (*check all that apply*)
- _____ 1. Price of oil/gas
 - _____ 2. Different residence
 - _____ 3. Different woodstove/furnace
 - _____ 4. Preference for other heating energy source. Please list: _____
 - _____ 5. Sufficient firewood leftover from last year
 - _____ 6. Did not acquire less firewood
 - _____ 7. Other _____

23. How many cords of wood can you store at or near your house to meet your needs for convenience, aesthetics and wood dryness?
 none <1 1 2 3 4 5 or more do not know

24. How long have you been heating with firewood? _____years do not know

Wood Pellets

25. Did you purchase wood pellets any time during 2008 (January through December 2008)?
 yes no **(if no, skip to Question 38)**

26. How many tons did you get? _____tons do not know

27. Who did you buy your pellets from?

a. Name of dealer(s) _____

b. Town or phone number of dealer(s) _____

c. did not buy it d. do not know name of dealer(s)

28. Do you know the forest property where your wood pellets came from?

yes no do not know **(if no, skip to Question 30)**

29. If yes, was the property within 50 miles of where you live?

yes no do not know

30. Did you have any difficulty getting pellets this year? yes no do not know

31. Did you get a different quantity of wood pellets for heating this year compared to last year?

more less same **(if same, skip to Question 34)**

32. If you acquired more pellets this year, why? *(check all that apply)*

1. Price of oil/gas

2. Different residence

3. Different woodstove/furnace

4. Desire for more energy security

5. Did not acquire more pellets

6. Other _____

33. If you acquired less pellets this year, why? *(check all that apply)*

1. Price of oil/gas

2. Different house

3. Different woodstove/furnace

4. Preference for other heating energy source. Please list: _____

5. Sufficient pellets leftover from last year

6. Did not acquire less pellets

7. Other _____

34. How satisfied were you with your pellets this year overall? (*circle*)

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
a. Ash content	1	2	3	4	5
b. Quantity received relative to amount ordered	1	2	3	4	5
c. Heating efficiency	1	2	3	4	5
d. On-time delivery	1	2	3	4	5

35. How long have you been heating your residence with wood pellets? _____ years

36. Why did you choose wood pellets over firewood as a heating source? (*check all that apply*)

- 1. Ease of use
- 2. Less mess
- 3. Perceived fuel availability
- 4. Perceived fuel cost
- 5. Perceived stove cost
- 6. Preexisting heating system
- 7. Other _____

37. What measures do you take to increase or monitor the efficiency of your wood pellet stove?

- 1. Burn seasoned wood. As much as 50% of the weight of green wood can be water, which has to be burned off before heat can be released into your house. Seasoned wood burns more efficiently.
- 2. Use hot bright fires. This burns volatile gases more quickly, producing fewer safety hazards and air quality problems than a fire that is over-damped.
- 3. Monitor temperature of the gases leaving the stove. Using a stack thermometer will indicate whether you are operating at the range for most efficiency and least pollution: about 300 to 400°F.
- 4. Remove excess ashes. Too much ash can cut down on the oxygen needed for woodburning.
- 5. Tighten up the house. Insulation, weather stripping, storm windows and caulking can all reduce the amount of wood required to heat your home.
- 6. Look outside to check emissions. The absence of smoke indicates that your stove is burning cleanly and effectively.
- 7. Regularly inspect stove and chimney. Look for warping, check the baffle to make sure there are no gaps.

Biomass Heating Options

38. How interested are you in heating your residence with the following fuels?*(circle)*

	Very interested	Somewhat interested	Neutral	Somewhat not interested	Not at all interested	Not applicable
a. Firewood	1	2	3	4	5	NA
b. Wood pellets	1	2	3	4	5	NA
c. Grass products	1	2	3	4	5	NA

39. How interested are you in having public buildings such as the schools or library in your town heated with the following fuels? *(circle)*

	Very interested	Somewhat interested	Neutral	Somewhat not interested	Not at all interested	Not applicable
a. Firewood	1	2	3	4	5	NA
b. Wood pellets	1	2	3	4	5	NA
c. Grass products	1	2	3	4	5	NA

40. How interested are you in having a local plant that produces wood pellets in the Mad River Valley? *(circle one)*

Very interested	Somewhat interested	Neutral	Somewhat not interested	Not at all interested	Not applicable
1	2	3	4	5	NA

Please indicate whether you agree or disagree with the following statements.

41. I believe a pellet plant would provide good long-term employment opportunities for members of my community. *(circle one)*

Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree	Not applicable
1	2	3	4	5	NA

42. I prefer the wood products that I use for heating to be (*circle*)

	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree	Not applicable
a. Locally produced	1	2	3	4	5	NA
b. Harvested in ways that protect the integrity of the environment, including water quality, animal habitat and soil health	1	2	3	4	5	NA
c. Harvested in ways that protect the aesthetic and recreational values of forests	1	2	3	4	5	NA
d. Produced in ways that reduce green house gases	1	2	3	4	5	NA
e. Priced to provide fair returns to loggers/woodcutters and landowners	1	2	3	4	5	NA
f. Distributed in ways that provide low income households' with more affordable firewood or pellets.	1	2	3	4	5	NA

Comments:

43. If wood products for heating (e.g. firewood, wood pellets) are produced in my community, I have concerns about (*circle*)

	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree	Not applicable
a. The impacts on the ecology of our local forests, including water quality, animal habitat and soil health.	1	2	3	4	5	NA
b. The impacts on the aesthetic value of local forests and recreational use.	1	2	3	4	5	NA
c. The impacts of harvest operations, such as increases in heavy truck traffic, dust & noise	1	2	3	4	5	NA
d. Other (describe) _____	1	2	3	4	5	NA

Comments:

44. Local community groups want to start a Community Supported Firewood program to enhance the sustainability of energy and forest resource use in the region. How interested are you in participating in such a program?

Very interested	Somewhat interested	Neutral	Somewhat not interested	Not at all interested	Not sure
1	2	3	4	5	Not sure

45. Please identify here any questions, concerns or observations that you may have about wood-based heating.

Enough about wood heat, what about you?

46. Are you male or female?
 _____ Male _____ Female

47. What is your age now?
 _____ 18-24 _____ 35-44 _____ 55-64 _____ 74 or older
 _____ 25-34 _____ 45-54 _____ 65-74

48. Are any members of your household (including yourself) in the following groups?
 _____ 1. under 18 of age
 _____ 2. over 60 of age
 _____ 3. disabled
 _____ 4. none of the above

49. In which town is your primary residence?
 _____ 1. Bristol _____ 6. Fayston
 _____ 2. Lincoln _____ 7. Waitsfield
 _____ 3. Monkton _____ 8. Warren
 _____ 4. New Haven _____ 9. Moretown
 _____ 5. Starksboro _____ 10. Other _____

50. How do you like to use or enjoy forests? (*check all that apply*)

- 1. Hike, walk, run or picnic
- 2. Hunt
- 3. Fish
- 4. Watch wildlife, birding
- 5. Collect mushrooms, fiddleheads, wild leeks (ramps), berries, medicinal plants, ornamental plants, craft materials or other non-timber forest products
- 6. Harvest timber
- 7. Mountain bike
- 8. ATV or snowmobile
- 9. Cross-country ski or snowshoe
- 10. Camping
- 11. Maintain a camp or forest cabin
- 12. Other _____

51. How would you prefer to learn more about wood- or grass-based heating options in your community? (*check all that apply*)

- 1. From a neighbor
- 2. Town newspaper
- 3. Email sent to me
- 4. Internet website
- 5. Listserv
- 6. Mail
- 7. Meeting in my town
- 8. Workshop
- 9. Other _____

52. Is your family eligible for the Low Income Home Energy Assistance Program (LIHEAP) program?

yes no do not know not applicable

53. What is your annual income?

- 1. Less than \$25,000
- 2. \$25,000-39,999
- 3. \$40,000-59,999
- 4. \$60,000-79,000
- 5. \$80,000-99,000
- 6. More than \$100,000

Thank you very much! Please return in the enclosed business reply envelope *or mail* to Rebecca Haskell, UVM Center for Sustainable Agriculture, 106 Highpoint, Suite 300, Colchester, VT 05446.