

Lewis and Clark County
Residential Wood Burning
Survey of Households

August 2012

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PURPOSE

There is an expectation that the greater Helena area will soon be designated as non-attainment by the Environmental Protection Agency (EPA), as air quality has exceeded allowable PM_{2.5} levels. The purposes of this research were to 1) provide data that will inform the development of wood burning public education efforts by Lewis and Clark County, and 2) support Montana Department of Environmental Quality's (DEQ) area attainment demonstration efforts.

To capture data on all wood burning devices, a comprehensive list of appliances was used. This included fireplaces, fireplace inserts, wood stoves, masonry furnaces, wood furnaces and boilers, and pellet stoves.

LOGISTICS

Sample	<p>270 homes, located in Montana's Lewis and Clark County, with at least one wood burning appliance on the premises.</p> <p>The sample was determined based on the U.S. Census Bureau's projected 2011 population for Lewis and Clark County of 64,318.</p>
Call Log	<p>60,700 attempted dials</p> <p>56,277 calls did not connect (no answer, busy, bad number, technical)</p> <p>4,423 calls connected with a live person</p> <p>3,677 calls were ended (not residence, not available)</p> <p>746 people began the survey</p> <p>476 calls ended after survey began (opted out, interviewer ended)</p> <p>270 surveys were completed</p>
Location	<p>31% live within the City of Helena, while the remaining 69% reside outside of city limits.</p>
Method	<p>Telephone survey, with homes selected by random digit dialing in the defined geographic area. Using the proven computer aided telephone interviewing (CATI) process, calls were made each day (including weekends) between the</p>

hours of 6-9 p.m. beginning on Friday, August 3, 2012 and finishing on Thursday, August 9, 2012. The 270 survey quota was reached within seven days.

Date	August 3 – August 9, 2012
Margin of Error	± 5% at the 90% confidence interval. This means that had all residents with a wood burning appliance been surveyed, there is a 90% chance the results would be within ± 5% of the results in this survey. The U.S. Census Bureau statistical standard for published data is to use the 90% confidence and ± 5% error levels.
Incidence	41% of Lewis and Clark County households have at least one wood burning appliance.

DEMOGRAPHIC CHARACTERISTICS OF SAMPLE

The table below provides a profile of the 270 survey respondents. It is important to note that because households were screened for wood burning appliances, this data will not necessarily match the area's overall population. In addition, the data represents descriptions of people who were reached and who agreed to participate in the survey.

In general, the sample of Lewis and Clark County residents who have wood burning appliances in their homes can be described as:

- Between the ages of 55 and 74
- Having less than a completed college education
- Caucasian
- A couple without any young children in the home
- Having an annual income between \$25,000 and \$75,000

Red highlights indicate majority descriptors

Category	Detail	Survey (%)
Age	18-24	3
	25-34	4
	35-44	8
	45-54	18
	55-64	26
	65-74	22
	75+	15
	NA	4
Education	High school or less	28
	Some college	22
	Vocational school	2
	College degree	26
	Graduate or professional degree	0
	NA	21

Category	Detail	Survey (%)
Race/ethnicity	African American/Black	1
	American Indian	4
	Asian	1
	Caucasian	85
	Hispanic/Latino	2
	Other	2
	NA	5
Household description	Couple w/kids under 18	20
	Couple, no kids	56
	Single w/kids under 18	2
	Single, no kids	17
	NA	5
Household income	Less than \$25,000	16
	\$25-\$49,000	21
	\$50-\$74,999	20
	\$75-99,999	9
	\$100,000 or more	11
	NA	23

REPORT FINDINGS & RAW DATA

Attempting to review and/or compare the findings presented in this report against raw survey data may be confusing. Information provided in raw data tables is not always intuitively understood. For instance, questions with multiple answers (such as Q13, 18 and 19) will be formatted to capture each possible response in a separate cell. This is done for ease of tabulation. And although the information may be viewed in individual cells, rows or columns in the raw data file, it will likely be presented in aggregate form in this report. This is done to help users of the report more clearly understand the meaning and significant of the survey findings.

FINDINGS

Numbers, types and uses of wood burning appliances

Initial questions used to screen for qualified survey respondents revealed that 41% of the target population has at least one wood burning appliance in the home. Most homes have more than one: on average, each residence that burns wood has 1.8 wood burning appliance on the premises.

Fireplaces and wood stoves are the most common type of wood burning appliance found in homes: 57% of homes have at least one fireplace, and 49% at least one wood stove. An equal number of people have a fireplace insert (21%) or a pellet stove (20%). Masonry furnaces are found in only 8% of homes, followed by wood furnaces/boilers at 5%.

Although many homes have wood burning appliances, few use them as a primary heat source during the October through April heating season. With the exception of wood furnaces/boilers and masonry furnaces, the survey shows that most people do not use their wood burning appliances to heat their homes. Ninety-two (92) percent of the small number of people with wood furnaces/boilers **do** use these appliances for heat. Ninety (90) percent of those who have masonry furnaces also use them as a primary heat source. While in general there are many more wood stoves are in use, they are a primary heat source in just 51% of the homes where they are found. Just 26% of the people who have pellet stoves and fireplaces consider them a primary heat source, and fireplace inserts are a primary heat source in only 21% of the homes where they can be found.

The age of a wood stove or fireplace insert and whether the appliance is EPA-certified will affect emissions: older and uncertified units tend to produce more particulate and have a greater negative impact on air quality. One-quarter to one-third of the people with inserts and/or wood stoves did not know if their appliances were EPA-certified. Fifty-seven (57) percent of insert owners claimed their units were certified, while 52% of wood stove owners said the same. For both appliance types, two-thirds (66% and 67%) place the age at less than 20 years.

Frequency of burning

The frequency with which people have a fire in their appliance during the October through April heating season was skewed toward opposing ends of the scale. One-third (34%) said they burned daily (which was the high end of the survey's range), while

slightly less than one-third (29%) said less than once per week (the low end of the survey's range). Mid-frequency burning behavior – once a week to four-plus times per week, the middle of the survey's range – was fairly evenly distributed, from 4% to 11%. Fourteen (14) percent could not answer the question.

As might be expected, there appears to be some relationship between frequency and the appliance functioning as the home's primary source of heat. In short, an appliance that is the home's major source of heat is used more often. Among the 92% who said a wood furnace/boiler was their primary source of heat, 46% claimed they burn daily. Similarly, among the 51% who said a wood stove was the primary heat source, 52% said they burn daily.

The total amount of wood burned during a single season – October through April – is consistent with the finding that many appliances are not used as a primary heat source. Anecdotal data suggests that 3-4 cords of wood are required to heat a modestly sized (1,700 s.f.), reasonably well-insulated home. Research findings revealed that 38% of respondents burn 3 or more cords of wood during a single season. Thirty-seven (37) percent burn less than 3 cords, and 25% did not know how much wood they burned.

Wood and other materials burned

Homeowners burn a variety of materials in their appliances. More than half – 54% - use natural cut firewood, while 31% said they don't burn any of the materials listed. Scrap lumber is burned by 14%, and 10% burn household paper and trash. Six (6) percent burn manufactured fire logs. Understanding the types of material being burned is an important step in developing a public education strategy.

Among those who burn natural cut firewood, 58% cut it themselves on their own property or on public lands. Eighteen (18) percent source their firewood through a family member, neighbor or friend, while 11% purchase firewood from an independent seller. Lodgepole pine is the most often-burned wood (28%), followed by ponderosa pine (16%) and Douglas fir (7%). Thirty-four (34) percent don't know what type of wood they usually burn. Significantly more people with wood stoves burn lodgepole pine: 41% compared to 28% overall.

Wood storing practices

When asked how they store their firewood, 66% said they stack it off the ground, 79% split the wood before stacking, and 65% cover the wood. Regardless of whether they split, stack and cover, 42% say they wait for six months before burning their firewood.

Twenty-six (26) percent say they wait for a month or two, and 9% begin burning their firewood right away.

It is encouraging that so many respondents already follow practices that result in seasoned wood, which burns more cleanly. However, the opinions people have about these practices 1) reveal a softness that might lead to cessation of the behaviors, or 2) may indicate people have misreported their true actions. When asked about splitting, stacking and covering, 46% agreed these steps are practical, 40% said they help reduce pollution and 36% feel they are necessary. Sixteen (16) percent to 35% of respondents don't know if these steps are important.

Disadvantages of wood burning, and willingness to change behaviors

Slightly more than one quarter (27%) don't see any disadvantages to burning wood in their homes. There was equal weighting given to aspects that **were** considered disadvantages: 14% said yes to each of five separate factors: cost, inconvenience, work required, inside air quality and outside air quality. It is interesting – but not surprising – to note that issues with a direct impact on an individual (cost, work, etc.) are considered disadvantageous by more people than air quality (a more indirect outcome).

Respondents demonstrated a range of willingness to change their wood handling practices. Setting aside respondents who said they “already do” the behaviors (since their behavior is already correct), 59% said they were very or somewhat willing to let firewood dry for six months before burning, with 16% being not willing to do so. Fifty-six (56) percent were very/somewhat willing to stack wood off the ground, with 19% not willing. Fifty-one (51) percent said they were very/somewhat willing to cover their firewood, with 26% not willing. And 49% were very/somewhat willing to split their firewood before stacking, with 17% not willing. Willingness to split wood also reflected the greatest uncertainty, with 33% saying they were unsure about taking this step.

The moderate levels of willingness to change across all behaviors indicates people should be receptive to messages promoting change.

Perceptions about air quality

When it comes to opinions and beliefs about local air quality, an overwhelming 83% of respondents do not think there is an air pollution problem in their area. Among the 16% who **do** feel there is an air pollution problem, 49% say it's not serious. Thirty-eight percent say the problem is serious or very serious, and 13% don't know how serious the problem may be.

Asked further about the role of wood smoke in local air pollution, 58% believe it is a main or significant cause. Twenty-six (26) percent say wood smoke is insignificant or a non-factor. Sixteen (16) percent don't know what role wood smoke plays.

When it comes to health, two-thirds (66%) don't know if wood smoke poses any health issues, while 22% say it may be a problem for some people. Nine (9) percent believe wood smoke is not a threat to health, and just 3% see it as a serious health issue.

Although it seems logical that people with health issues exacerbated by wood smoke (asthma, heart disease, etc.) would be more likely to think wood smoke was a problem, research findings indicate this may not be the case. Twenty-seven (27) percent of the homes have at least one person with a health issue, while 73% do not have anyone with health problems. Both the homes-with-health-issue and homes-without-health-issue share similar opinions about wood smoke as a serious health issue (homes-with at 8%, homes-without at 2%) and wood smoke as not a threat to health (homes-with at 4%, homes-without at 10%). However, 31% of homes-with thought wood smoke might be a problem for some people, compared to 19% of homes-without.

RECOMMENDATIONS

The following recommendations are intended to help shape the development of wood smoke public education efforts. They will enhance the effectiveness of outreach meant to reduce PM_{2.5} levels by convincing Lewis and Clark County residents to adopt cleaner wood burning behaviors.

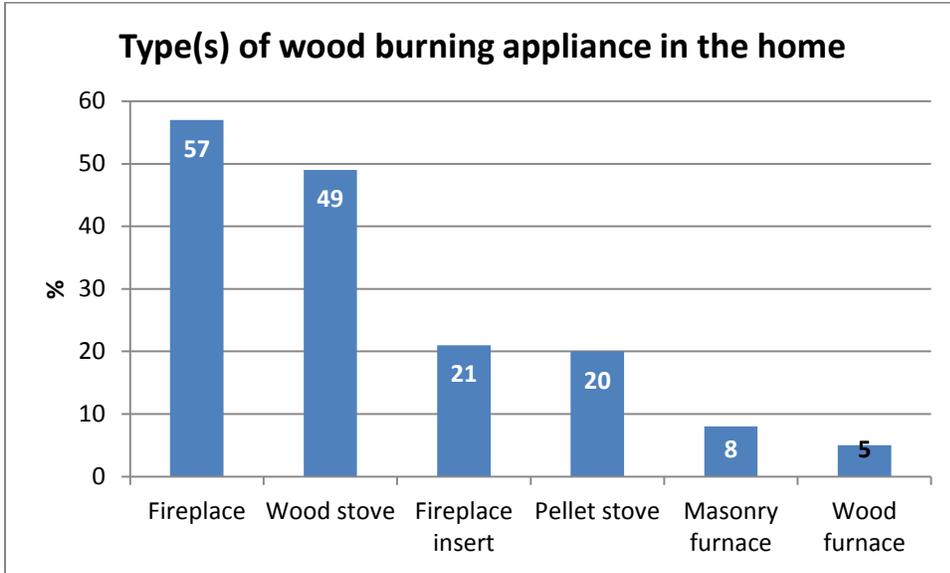
1. Develop messaging specifically for people who burn wood as a primary source of heat. This strategy will deliver the “biggest bang for your buck,” as the target audience burns more frequently and contributes more significantly to air quality issues than does the infrequent or recreational wood burner.
2. Consider the demographic profile of the most common wood burner when developing messages and selecting communications channels. The profile defines the most common wood burner as older (55-75 years), living with a spouse/partner in a home without children, earning \$25,000-\$75,000 per year, Caucasian, and without a college degree. This description may fit a retired person or someone in a blue collar job. It may be that the information is not enough to conclusively determine exact messages and precise methods of communication. However, you may be able to eliminate a number of options. For instance, using the Internet or technology may not be most effective with older residents. From the messaging perspective, suggesting that wood smoke is not healthy for young children is not likely to resonate with couples who do not have children living at home.
3. Be cautious in developing any strategies based on health issues. Since even people with health problems – or who live with others that have health problems – do not strongly believe wood smoke is a health threat, this approach may not be effective.
4. Incorporate the top perceived disadvantages of wood burning into communications efforts. Factors that will have a direct and material impact on the person – such as cost, the inconvenience and work required to obtain and burn wood – are likely to be most powerful.
5. Since more than 80% of respondents do not think there is an air pollution problem in the area, presenting pollution as the only reason to change wood burning behaviors is unlikely to be effective. Improved air quality should be paired with other benefits that target audiences are more apt to believe and respond to. These might include actions that offset the factors respondents identified as disadvantages of wood burning. Cost is an example. Educating people that they can save money by

burning seasoned wood because it produces more heat is a way to address the cost issue. A secondary message about air quality can be included.

6. Keep the public education/outreach approach simple and clear. Do not try to communicate too many messages. Speak in the language most comfortable to your audience, and don't use acronyms, jargon, or unfamiliar terminology.
7. Base communications strategies on the benefits of clean wood burning and addressing any barriers to behavior change perceived by the target audience, as identified in this research. As resources allow, implement a combined carrot-and-stick approach: educate residents about what they will personally gain from adopting clean burning behaviors, and lay out the penalties they may experience by not obeying local laws.
8. Consider partnering with nonprofits such as the American Lung Association or other respected health agencies. These organizations may have enhanced credibility when disseminating wood smoke-related messages to target audiences.

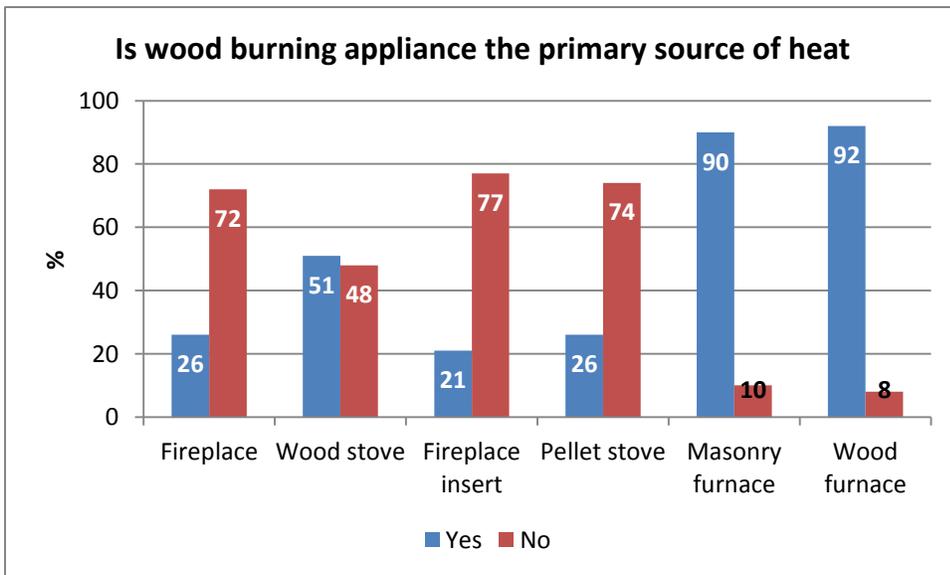
DATA CHARTS

“n” refers to sample size, and is shown for each chart.



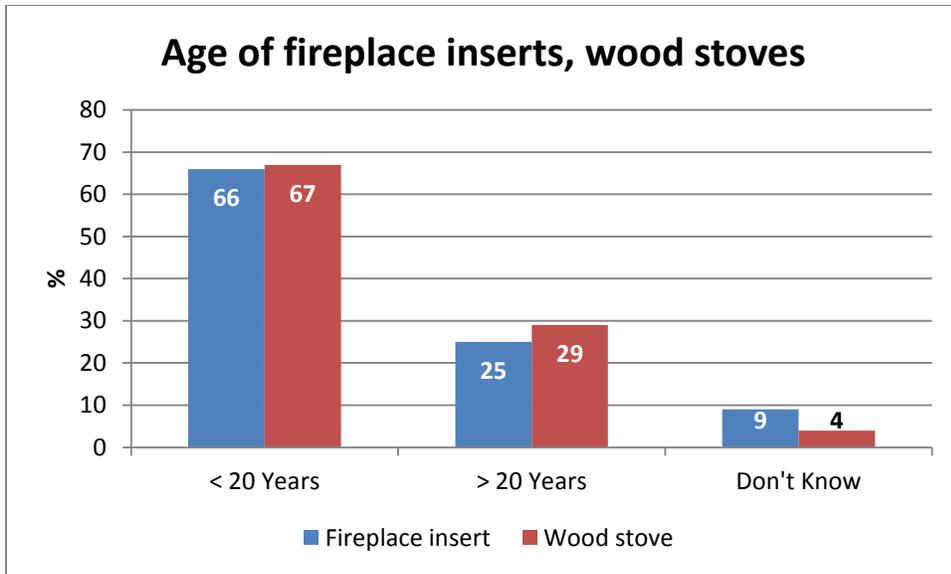
n = 270. Respondents could choose multiple answers, so total will not add to 100%.

- Each residence that burns wood has an average of 1.8 wood burning appliances



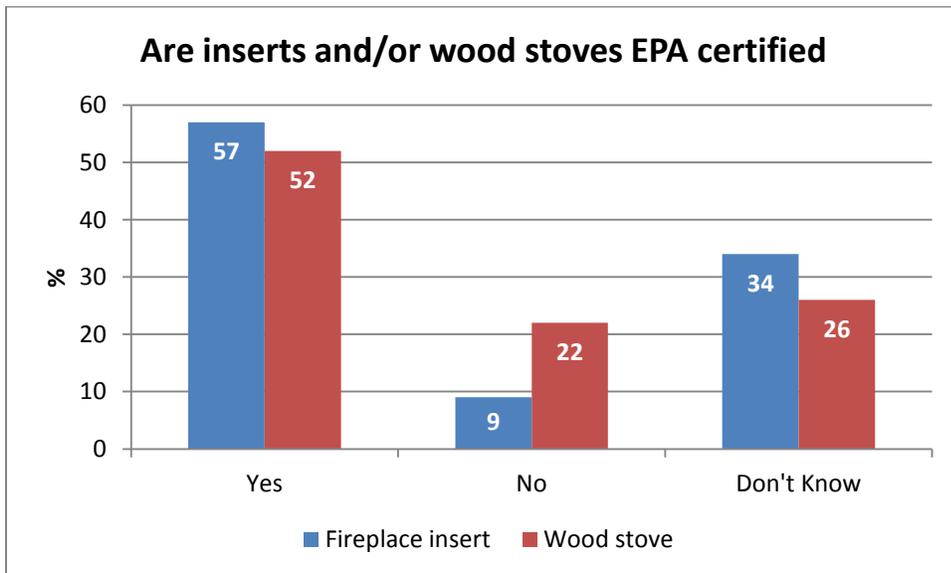
N = 270.

- Most people do not use their wood burning appliances to heat their homes



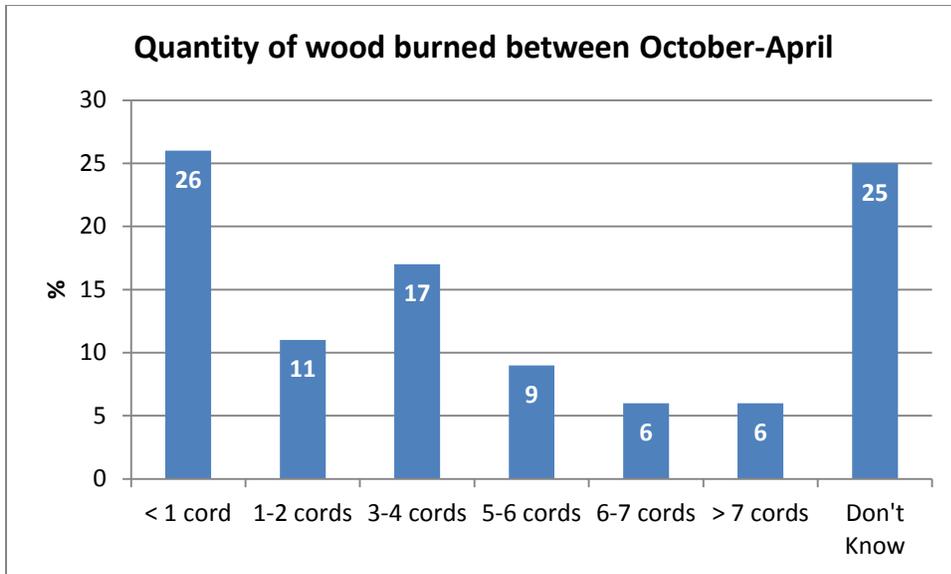
Inserts, n = 56; wood stoves, n = 132.

- More than two-thirds of the fireplace inserts and wood stoves in homes are less than 20 years old.



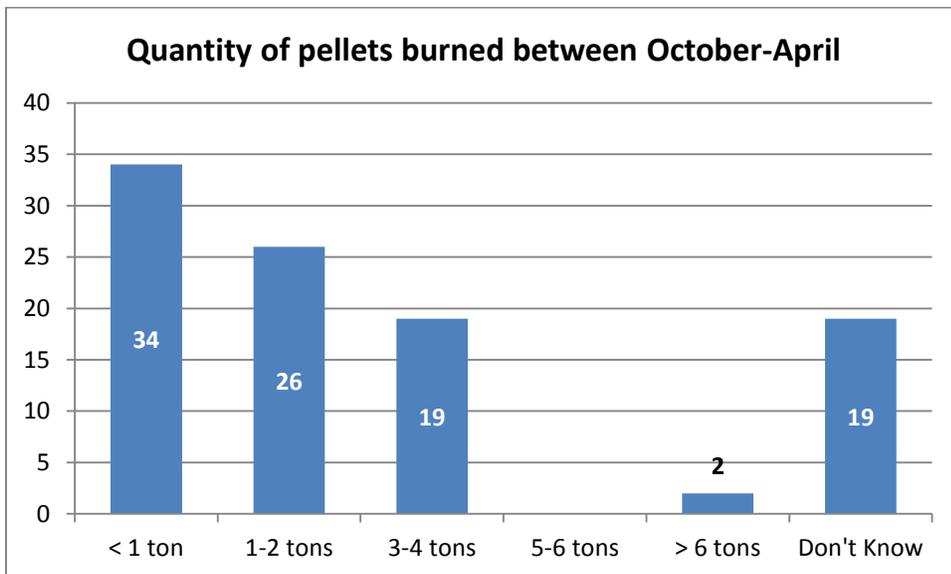
Inserts, n = 56; wood stoves, n = 132.

- Data on certified appliances may be under-stated, as certification has been required since the late 1980s (approximately 24 years ago); there is a gap between appliance age and certification that may be explained in this way



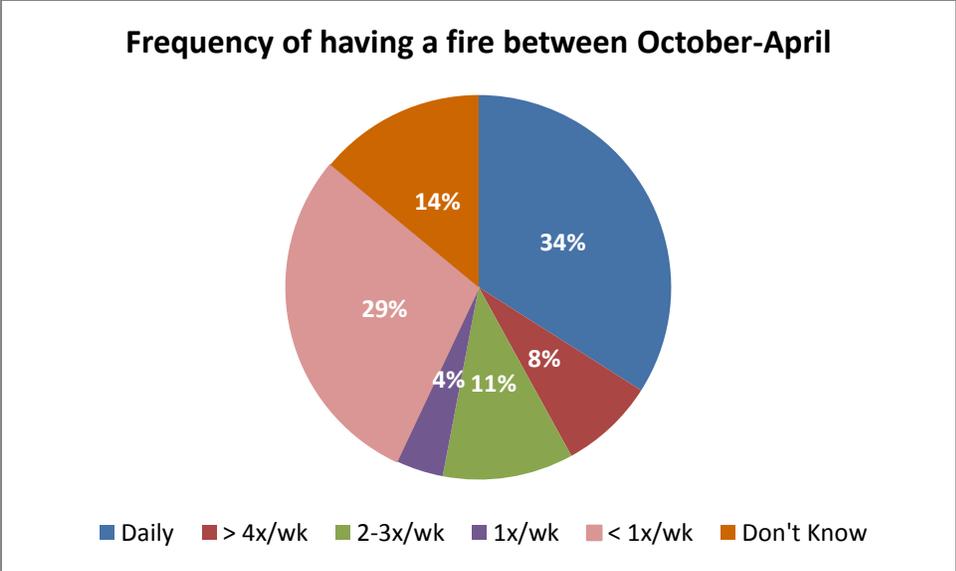
n = 240.

- Anecdotal data indicates 3-4 cords of wood are required to heat a moderately sized (1,700 s.f.), reasonably well-insulated home



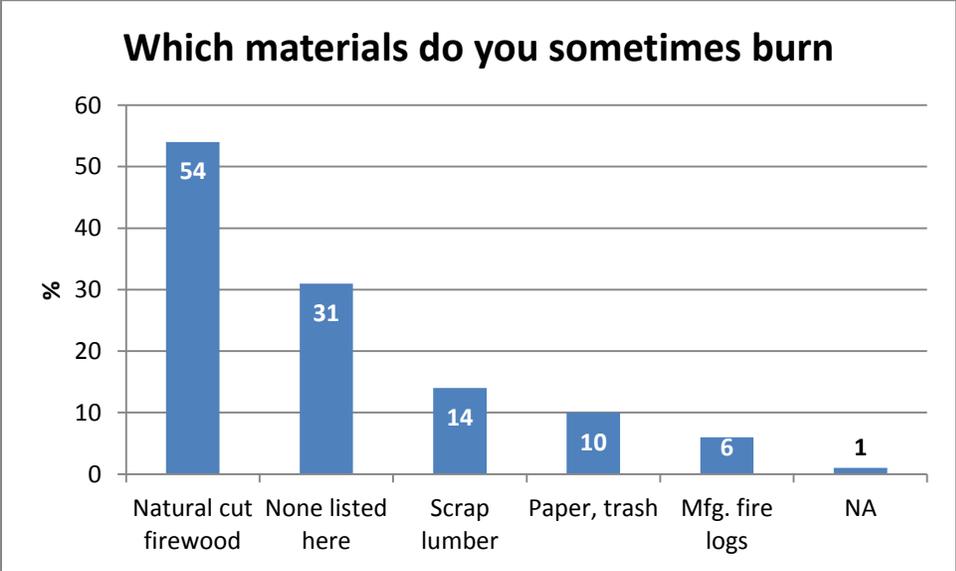
n = 53.

- Anecdotal data suggests around two tons of pellets will heat a 1,700-2,000 s.f., reasonably well-insulated home

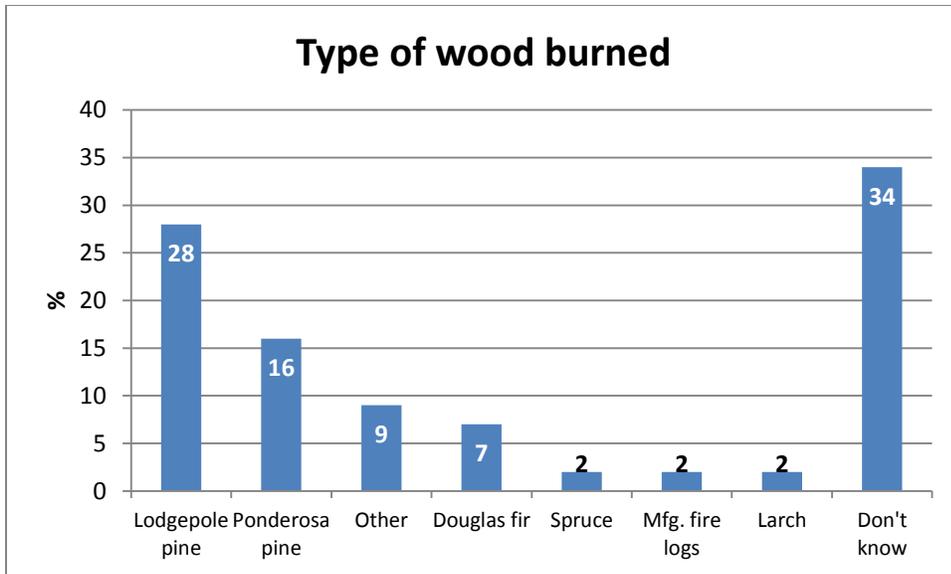


n = 240.

- As seems logical, there appears to be a relationship between frequency of burning and whether the appliance is a primary source of heat

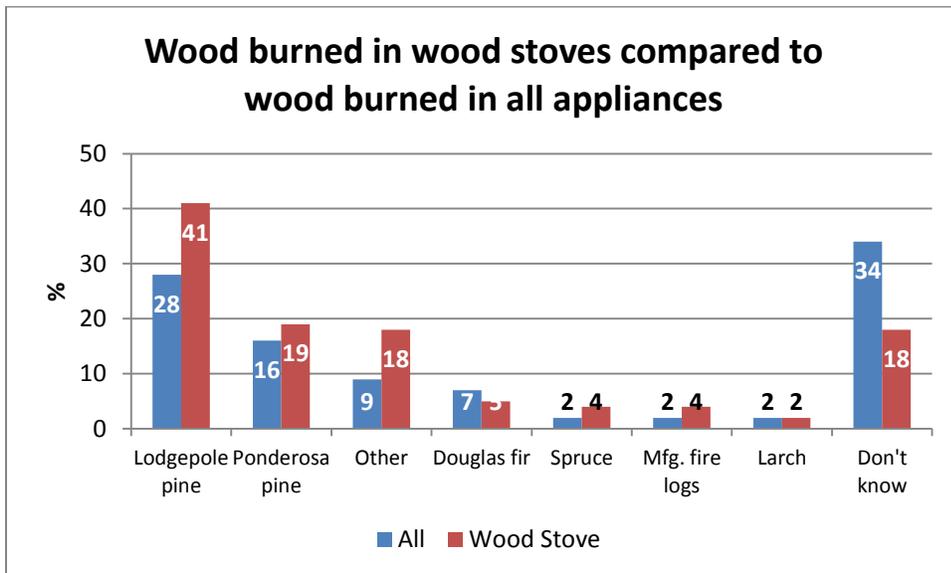


n = 240. Respondents could choose multiple answers, so total will not add to 100%.



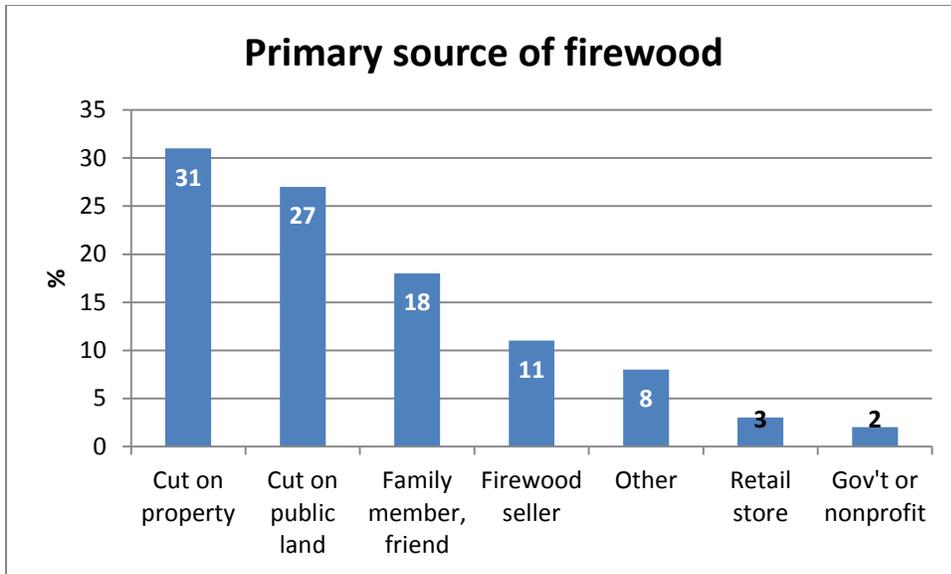
n = 240. Respondents could choose multiple answers, so total will not add to 100%.

- More than one-third of respondents don't know what type of wood they burn



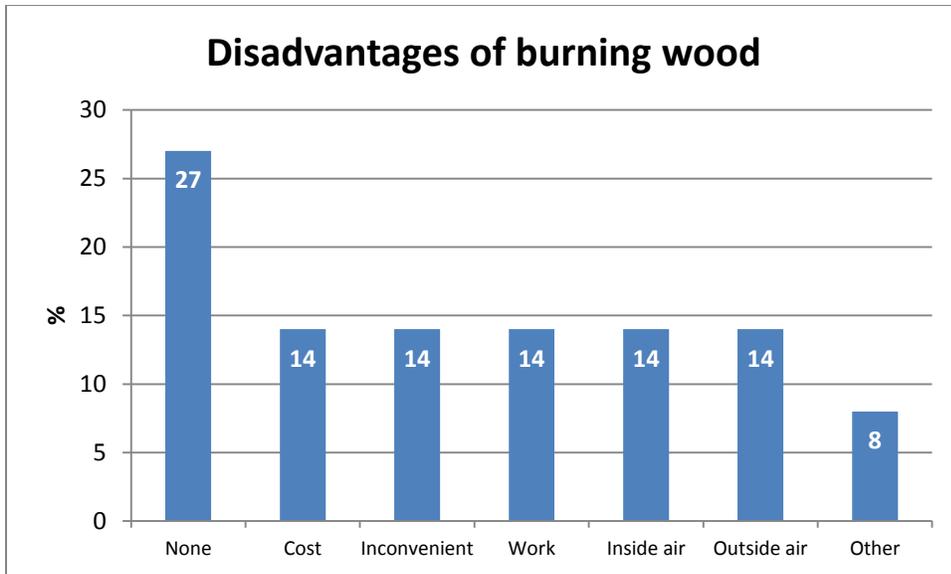
All, n = 240; wood stoves, n = 132.

- Significantly more wood stove users burn lodgepole pine



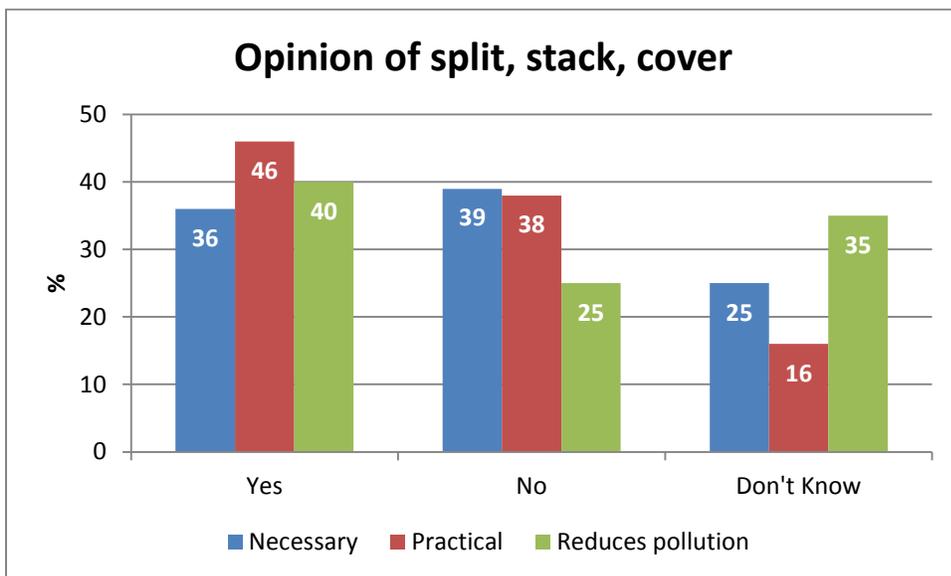
n = 240.

- More than half – 58% – of those who burn natural cut firewood cut it themselves on their own property or on public land



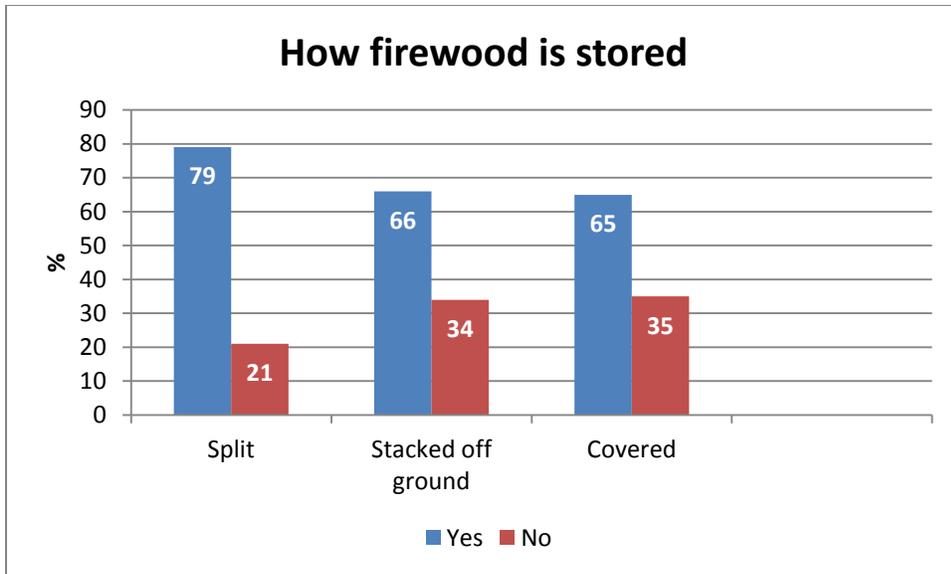
n = 131. Respondents could choose multiple answers, so total will not add to 100%.

- Combined, the factors that directly impact wood burners – cost, inconvenience, work – are considered disadvantageous by more respondents than the less tangible environmental issues



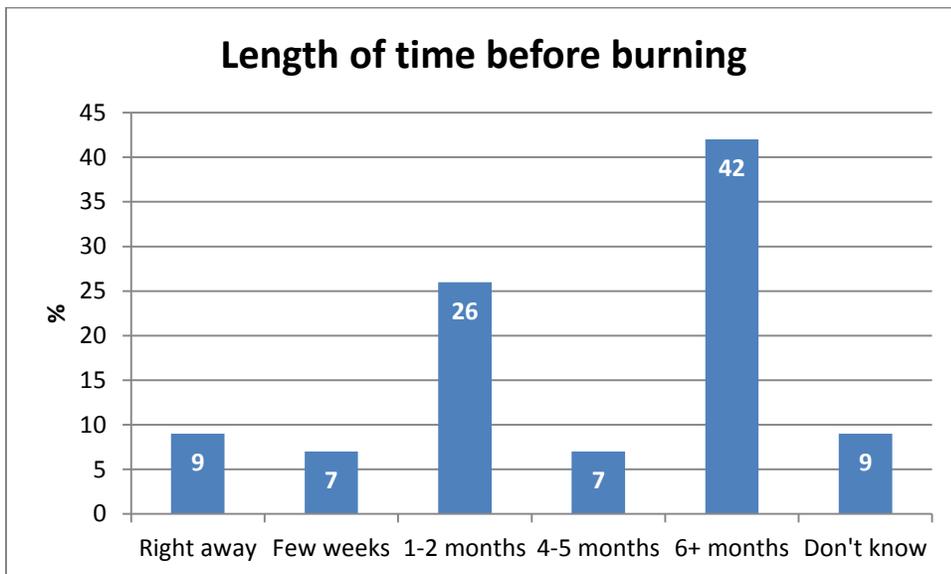
n = 240.

- While many people are handling and storing wood in a manner that results in cleaner burning, the belief that these practices are not necessary or practical may be a red flag



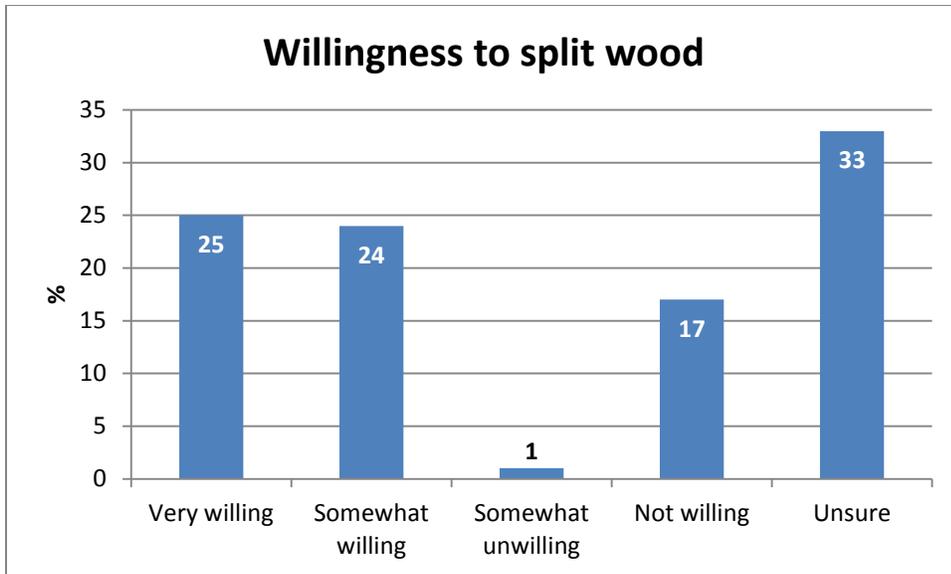
n = 240.

- A significant majority (79%) split their firewood before storing, while two-thirds stack it off the ground and keep the wood covered



n = 240.

- While firewood storing practices are encouraging, fewer respondents (49%) allow their wood to dry the recommended six months before burning

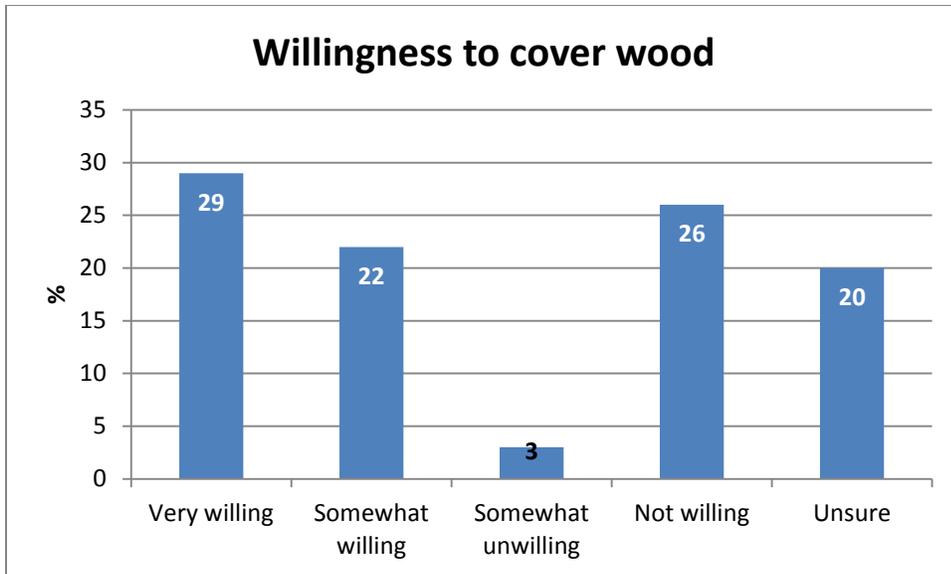


n = 80.

- Willingness to split wood reflects the greatest level of uncertainty

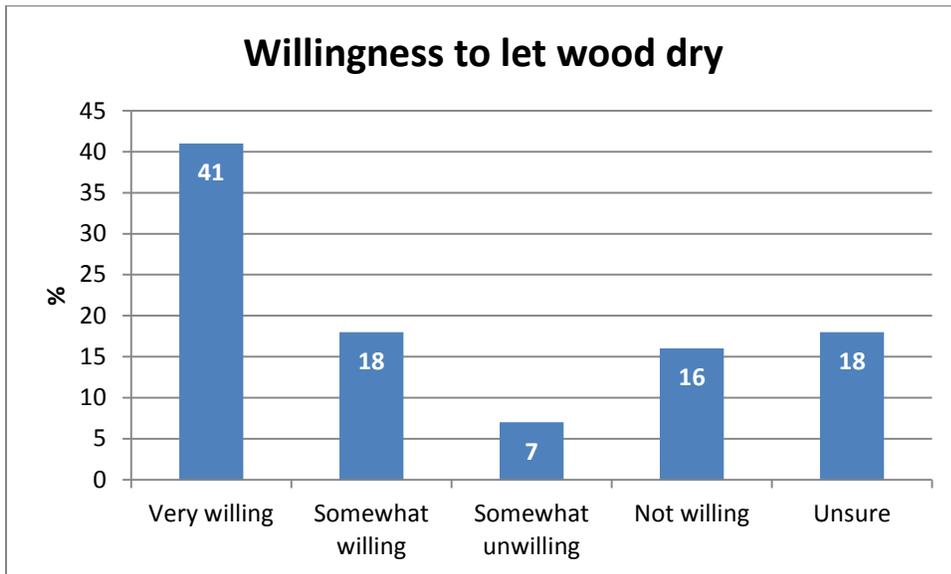


n = 93.



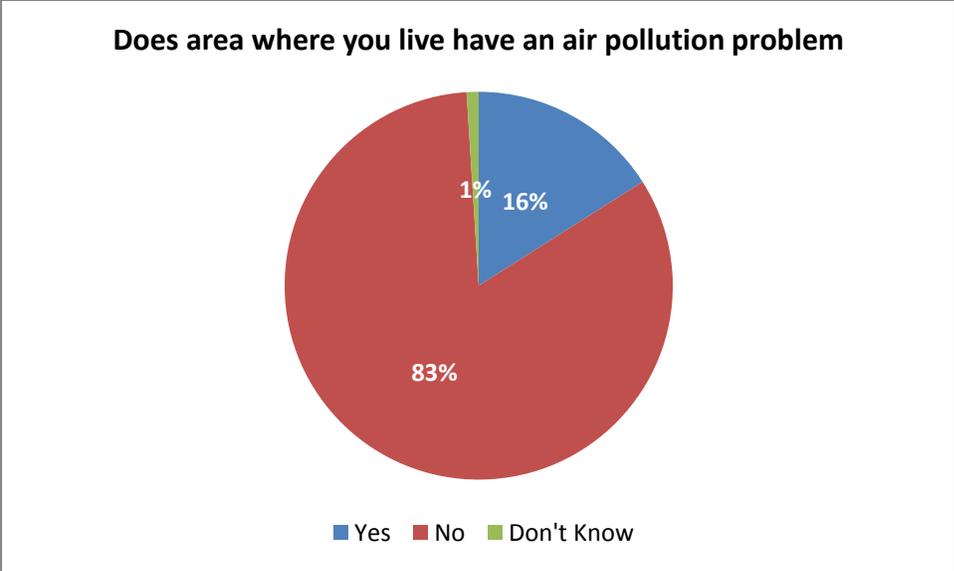
n = 99.

- Resistance is greatest to covering firewood



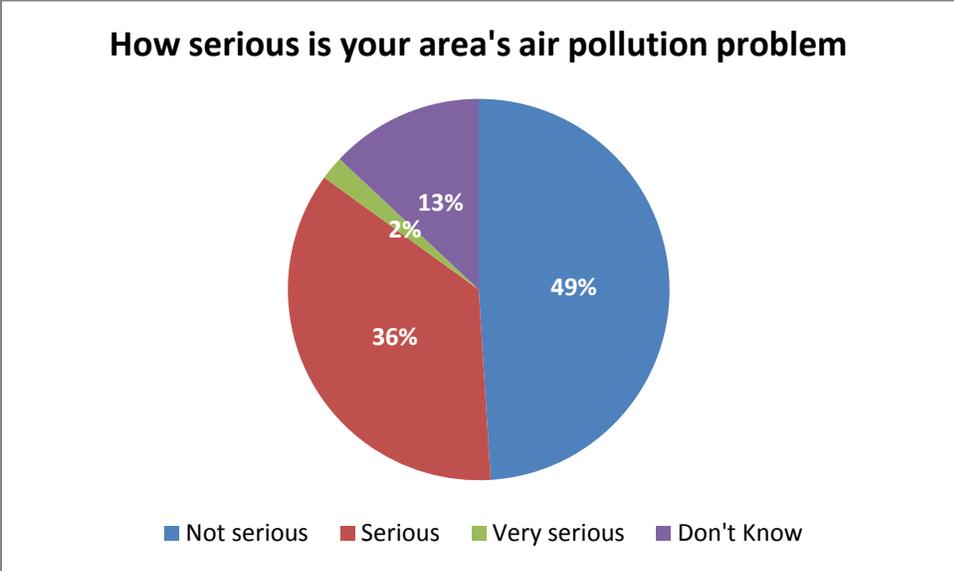
n = 107.

- The greatest number of people are willing to let firewood dry before burning – this is likely affected, to some degree, by the lack of effort the behavior requires



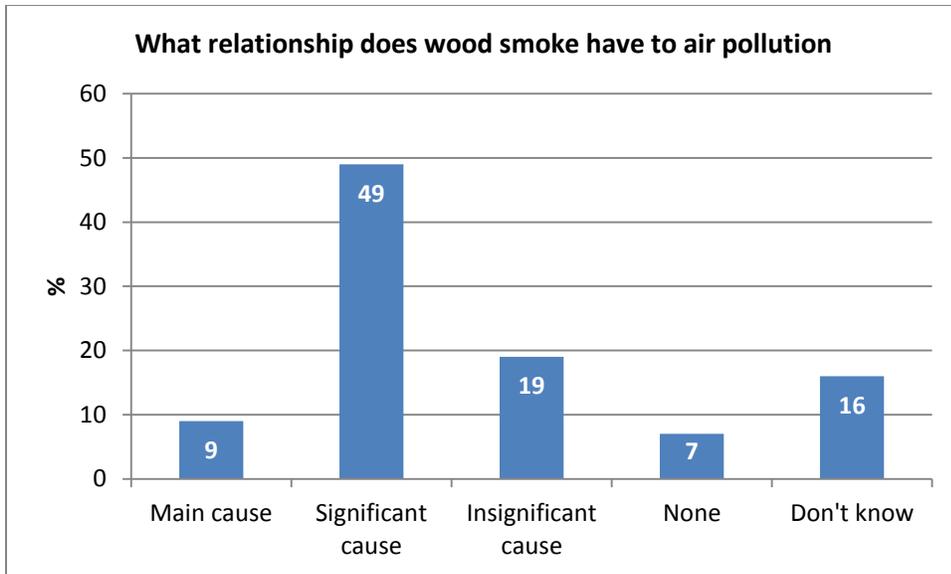
n = 270.

- The perception that an air pollution problem does not exist is a significant barrier to using this as a reason to change wood burning behaviors



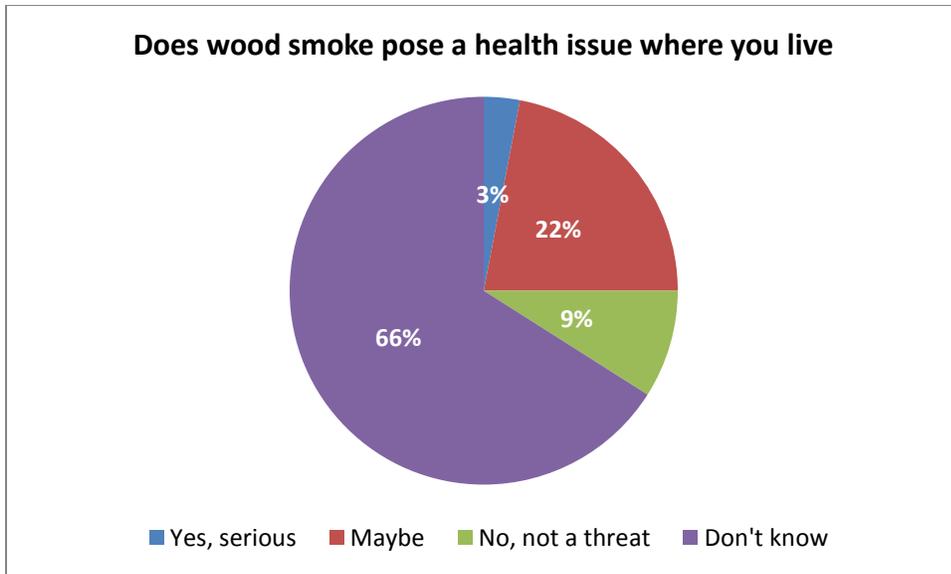
n = 45.

- Among those who believe air pollution is an issue, fewer than half perceive the problem as serious



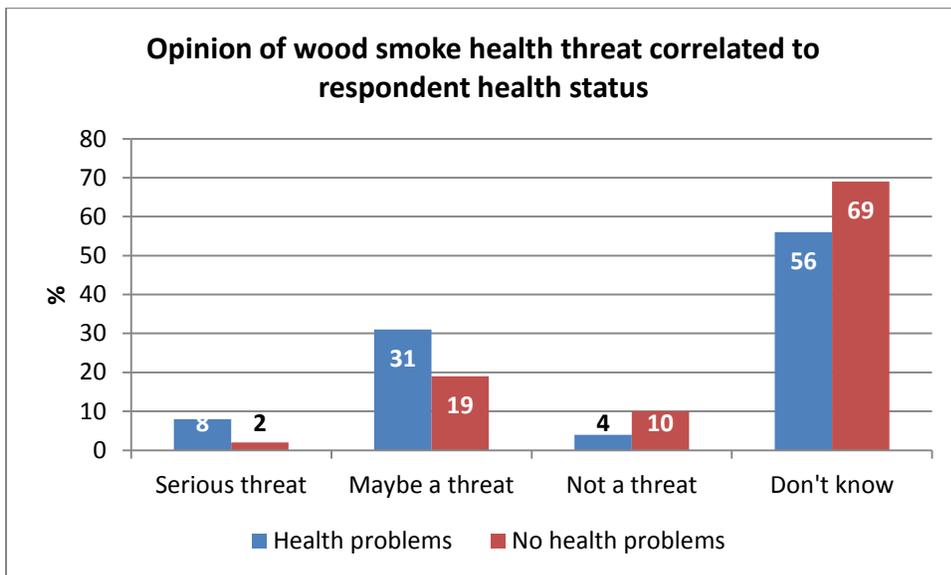
n = 43.

- Among those who believe there is an air pollution problem, more than half think wood smoke contributes to the issue



n = 270.

- Less than one-third think wood smoke poses a health threat



n = 270.

- Even people who have health problems themselves, or live with others that do, don't overwhelmingly perceive wood smoke as a health risk

QUESTIONNAIRE

Questionnaire/Residential

INTRODUCTION

Hello. I'm calling from [insert name of data collection firm], an independent market research firm. My name is _____. We are interviewing residents of Lewis and Clark County about home heating. You are one of approximately 270 people, selected at random, being interviewed. Your answers will be kept anonymous. We aren't selling anything and no one will contact you as a result of this call. May I begin?

SCREENER

(Note: Questions marked with an asterisk () can be used for comparison to the 1984 Helena air quality survey.)*

1. Before we begin, please tell me if your home is in Lewis and Clark County.
 - a. Yes
 - b. No
 - c. DK/NA

2. Please tell me which of the following best describes the location of your home.
 - a. Within city limits
 - b. Outside of city limits
 - c. DK/NA

I'm going to start by reading a short list of wood burning appliances, with a few questions about each one.

3. Do you have a wood-burning fireplace in your home? If "yes," how many?*
- a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4
 - f. DK/NA
-
- 3a. Is it your primary source of heat?
 - a. Yes
 - b. No
 - c. DK/NA

4. Do you have a fireplace with an insert? By “insert,” I mean basically a wood stove that sits inside the fireplace. If “yes,” how many?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
- f. DK/NA

4a. Is it your primary source of heat?

- a. Yes
- b. No
- c. DK/NA

4b. Do you know if your fireplace insert is certified by the EPA?

- a. Yes
- b. No
- c. DK/NA

4c. Approximately how old is your fireplace insert? Is is... **(READ LIST)**

- a. Less than 20 years
- b. More than 20 years
- c. DK/NA

5. Do you have a wood burning stove? If “yes,” how many?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
- f. DK/NA

5a. Is it your primary source of heat?

- a. Yes
- b. No
- c. DK/NA

5b. Do you know if your wood stove is certified by the EPA?

- a. Yes
- b. No
- c. DK/NA

5c. Approximately how old is your wood stove? Is it... (READ LIST)

- a. Less than 20 years
- b. More than 20 years
- c. DK/NA

6. Do you have a wood furnace or wood boiler? If "yes," how many?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
- f. DK/NA

6a. Is it your primary source of heat?

- a. Yes
- b. No
- c. DK/NA

7. Do you have a masonry furnace? If "yes," how many?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
- f. DK/NA

7a. Is it your primary source of heat?

- a. Yes
- b. No
- c. DK/NA

8. Do you have a pellet stove? If "yes," how many?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
- f. DK/NA

8a. Is it your primary source of heat?

- a. Yes
- b. No
- c. DK/NA

WOOD BURNING PRACTICES/BEHAVIORS

9. During a single season, what quantity of pellets do you burn? By “season,” we mean between October and April. Do you burn...
- Less than one ton (less than 50 bags)
 - One to two tons (50 to 100 bags)
 - Three to four tons (101 to 200 bags)
 - Five to six tons (201 to 300 bags)
 - More than six tons (more than 300 bags)
 - DK/NA
10. During a single season, how often do you usually have a fire in your wood burning appliance? By “season,” we mean between October and April. Would you say you build a fire at home...
- Every day
 - 4 or more times a week
 - 2 or 3 times a week
 - Once a week
 - Less than once a week
 - DK/NA
11. During a single season, how much total wood do you burn? Do you burn...
- Less than one cord of wood
 - One to two cords of wood
 - Three to four cords of wood
 - Five to six cords of wood
 - Six to seven cords of wood
 - More than seven cords of wood
 - DK/NA
12. What type of wood do you usually burn? Is it...
- Douglas fir (aka red fir)
 - Ponderosa pine (aka yellow pine, bull pine)
 - Lodgepole pine (aka jack pine)
 - Spruce
 - Larch (aka tamarack)
 - Manufactured fire logs (Duraflame, Presto, etc.)
 - Other
 - DK/NA

13. Which of the following do you sometimes burn in your wood burning appliance? (READ LIST)

- a. Manufactured fire logs
- b. Natural cut firewood
- c. Scrap lumber
- d. Household paper or trash
- e. None of these

14. Which of these is your PRIMARY source of firewood? (READ LIST)

- a. Cut it on my property
- b. Cut it on public lands
- c. A family member, neighbor or friend
- d. An independent firewood seller
- e. A government or nonprofit organization
- f. A local retail store, like a grocery or hardware store
- g. A hearth retailer
- h. Other

15. Which of the following best describes how you store wood? (READ LIST)

- a. It is stacked
- b. It is piled up in the yard
- c. Other

16. [IF STACKED] Is your wood...

Yes No DK

- a. Split before you stack it?
- b. Stacked so that it's not touching the ground?
- c. Covered, like with a roof or tarp?

17. Once you get your firewood, how long do you typically wait before you start burning it? Do you typically...

- a. Start burning it right away
- b. Store it for a few weeks before burning
- c. Store it for a month or two
- d. Store it for 4-5 months
- e. Store it for 6 months or more before burning
- f. DK/NA

18. What are some disadvantages of burning wood in your home, if any?

- a. Cost
- b. Inconvenience
- c. Work required
- d. Air quality (inside)
- e. Air pollution (outside)
- f. None
- g. Other

BEHAVIOR CHANGE

19. Let's go back to the wood you use. Experts say that to reduce the amount of smoke and air pollution from wood burning in homes, we should split the wood, stack it off the ground and cover the wood for at least six months before burning it. In your opinion, is this... **(READ LIST)**

Yes No DK

- a. Necessary
- b. Practical
- c. Helpful in reducing air pollution

20. Would you personally be Very Willing, Somewhat Willing, Somewhat Unwilling or Not Willing to split your wood before stacking it?

- a. Already do
- b. Very willing
- c. Somewhat willing
- d. Somewhat unwilling
- e. Not willing
- f. Unsure/NA

21. Would you personally be Very Willing, Somewhat Willing, Somewhat Unwilling or Not Willing to stack your wood up off the ground?

- a. Already do
- b. Very willing
- c. Somewhat willing
- d. Somewhat unwilling
- e. Not willing
- f. Unsure/NA

22. Would you personally be Very Willing, Somewhat Willing, Somewhat Unwilling or Not Willing to cover your wood stack?

- a. Already do
- b. Very willing
- c. Somewhat willing
- d. Somewhat unwilling
- e. Not willing
- f. Unsure/NA

23. Would you personally be Very Willing, Somewhat Willing, Somewhat Unwilling or Not Willing to let your firewood dry for at least six months before burning it?

- a. Already do
- b. Very willing
- c. Somewhat willing
- d. Somewhat unwilling
- e. Not willing
- f. Unsure/NA

AIR QUALITY PERCEPTIONS

24. In your opinion, does the area in which you live have an air pollution problem?*

- a. Yes
- b. No
- c. DK/NA

25. How serious is your area's air pollution problem?*

- a. Not serious
- b. Serious
- c. Very serious
- d. DK/NA

26. In your opinion, is wood smoke... **(READ LIST)**

- a. The main cause of air pollution in the area where you live
- b. A significant cause
- c. An insignificant cause
- d. Not a factor in air pollution in the area where you live
- e. DK/NA

27. In your opinion, does wood smoke pose any health issues where you live? Would you say that wood smoke... (READ LIST)

- a. Is a serious health issue in this area
- b. May pose health issues for some people
- c. Does not pose any serious health threat
- d. Is not a threat to health in this area
- e. DK/NA

28. As far as you know, does anyone in your household have any of the following health issues: asthma, bronchitis, heart or lung disease? [IF YES] Is that... (READ LIST)

- a. You
- b. Other adults
- c. Children
- d. All
- e. No one

DEMOGRAPHICS

29. I have just a few last questions for our statistical analysis. How old are you?*

- a. 18-24
- b. 25-34
- c. 35-44
- d. 45-54
- e. 55-64
- f. 65-74
- g. 75 or older
- h. NA

30. What is the last year of schooling you completed?

- a. High school or less
- b. Some college
- c. Vocational school
- d. College degree
- e. Graduate or professional degree
- f. NA

31. Which of the following best describes your household at this time? (READ LIST)

- a. Couple with children under 18 at home
- b. Couple with no children under 18 at home
- c. Single with children under 18 at home
- d. Single with no children under 18 at home
- e. NA

32. Which of the following best describes your race or ethnic background? **(READ LIST)**

- a. African American or Black
- b. American Indian
- c. Asian or Pacific Islander
- d. Caucasian or White
- e. Hispanic or Latino
- f. Other
- g. DK/NA

33. Finally, I'm going to list five broad categories. Just stop me when I get to the category that best describes your approximate household income – before taxes – for this year. **(READ LIST)**

- a. Less than \$25,000
- b. \$25 to \$49,999
- c. \$50 to \$74,999
- d. \$75 to \$99,999
- e. \$100,000 or more
- f. NA

CLOSE

Thank you for your cooperation. You've been very helpful. Goodbye.