

Appendix B

**Residential Wood
Burning Survey 2013
Summary**

Home Heating Survey Summary Report:

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The home heating survey was sent to over 6,000 out-of-town property owners, 4,500 Town P.O. Box holders and 200 private P.O. boxes. Out of these 10,700 property owners and renters there were 574 respondents to the survey. The variety of respondents whom participated in the survey gives the town an accurate snapshot of data that can be used to analyze the community's home heating habits.

Over 85% of the respondents indicated that they owned property in Mammoth Lakes and 75% of these homeowners purchased their homes after the woodstove ordinance was put into effect in 1990. Of the indicated property owners there were 295 condominiums, 178 single family homes and approximately 44% these property owners consider themselves full time occupants during the winter months of November through March. The remaining 15% of the survey respondents indicated that they were renters and 92% of these renters consider themselves full occupants during the winter months of November-March. The rental residence respondents include 30 condominiums, 28 apartments, 27 single family homes and 1 mobile home.

Only 156 (28%) of the survey respondents indicated that a wood burning appliance was their homes primary source of heat. Out of these primary wood burning responses 50% are operating a wood burning appliance and over 25% are operating a pellet burning appliance. 34 people are operating an EPA phase II appliance, while another 34 are operating an EPA phase I appliance, 24 people are operating a fireplace with an insert, and 13 people are operating a non-compliant woodstove or fireplace. The majority of these respondents are using approximately 1-3 cords of wood per average winter season.

Over 77% of the survey participants are using an alternative home heating device as their primary source of heat, including various propane devices as the most specified appliance.

General findings show that 93% of the respondents are only burning dry wood, however 3 respondents admitted to burning their trash. Other poor burning techniques were revealed in this process. Based on these responses and a significant number of respondents whom indicated interest in becoming educated on the proper techniques of burning, I believe that it would be beneficial for the town to produce educational information on burning wise and specify items that are detrimental to the air quality and their home heating appliance when burned.

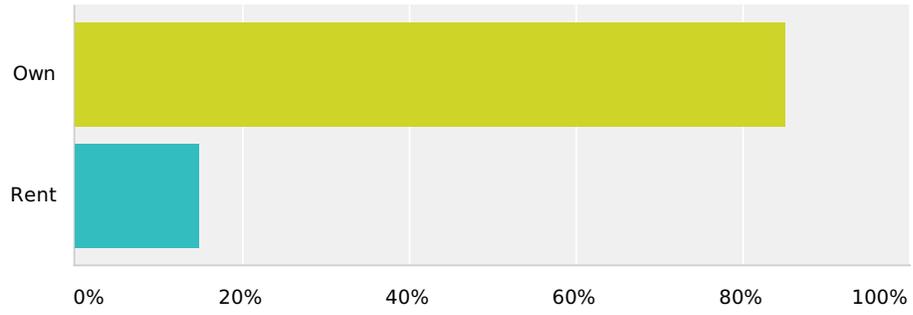
In addition to these findings the Town's cinder "concerns" were validated by many of the respondent's suggestions that the usage and maintenance of cinders used on the town's roadways is a large factor in generating poor air quality. Based on the survey results and the findings that will be identified in the air filter analysis, it could become beneficial for the town to analyze cinder usage and begin to consider other de-icing agents.

Almost 80% of the respondents were aware that the town issues no burning and burning curtailment days. Over 200 full time and part time residents also concluded that they would like to become a part of the Air Quality Notify Me list.

In conclusion of the survey results, gathered changeout data, public outreach strides, and fewer federal air quality regulation compliance issues it is evident that the Town has taken great strides to begin to meet more stringent air quality state regulations. Attached are informative graphs and raw data generated from the survey results.

Q1 Do you own or rent your property in Mammoth?

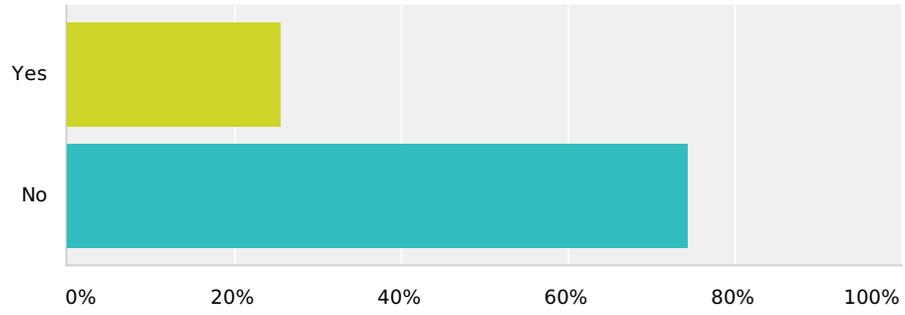
Answered: 572 Skipped: 0



Answer Choices	Responses	
Own	85.14%	487
Rent	14.86%	85
Total		572

Q2 Have you owned your property since before 1990?

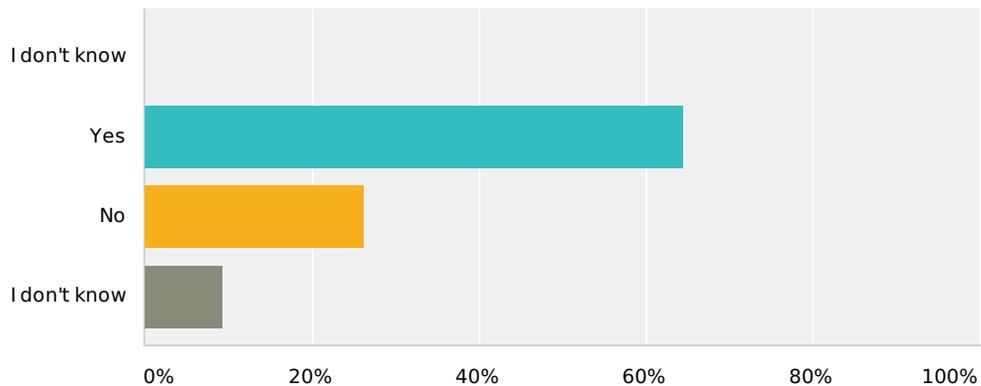
Answered: 484 Skipped: 88



Answer Choices	Responses	
Yes	25.62%	124
No	74.38%	360
Total		484

Q3 Have you replaced or installed your woodstove or home heating device with a new model after 1990?

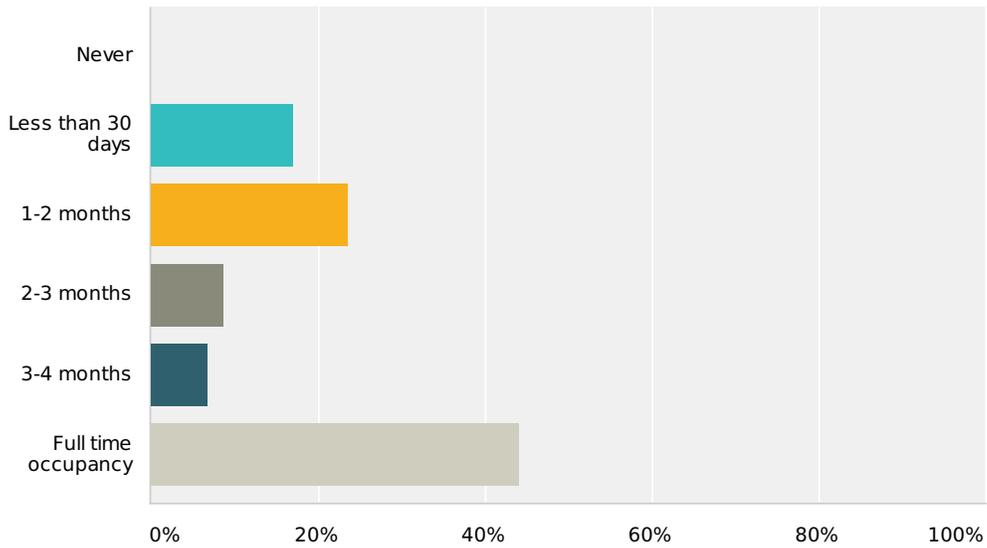
Answered: 484 Skipped: 88



Answer Choices	Responses
I don't know	0% 0
Yes	64.46% 312
No	26.24% 127
I don't know	9.30% 45
Total	484

Q4 How often is your property occupied during November-March?

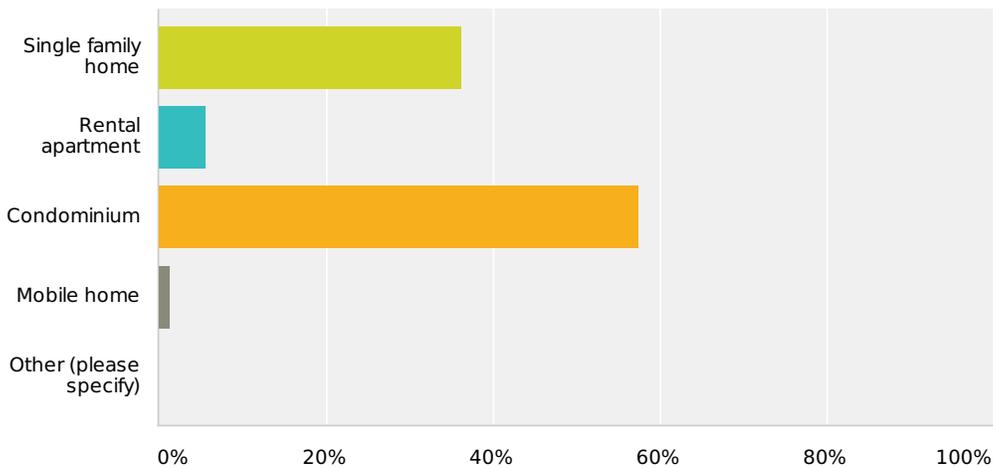
Answered: 565 Skipped: 7



Answer Choices	Responses	
Never	0%	0
Less than 30 days	16.99%	96
1-2 months	23.54%	133
2-3 months	8.67%	49
3-4 months	6.73%	38
Full time occupancy	44.07%	249
Total		565

Q5 What type of residence do you own or rent?

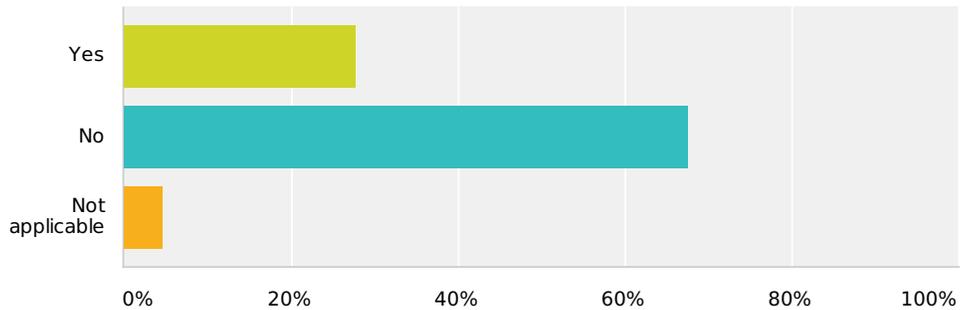
Answered: 564 Skipped: 8



Answer Choices	Responses
Single family home	36.17% 204
Rental apartment	5.50% 31
Condominium	57.45% 324
Mobile home	1.24% 7
Other (please specify)	0% 0
Total Respondents: 564	

Q6 Is a pellet or wood burning device your home's primary source of heat?

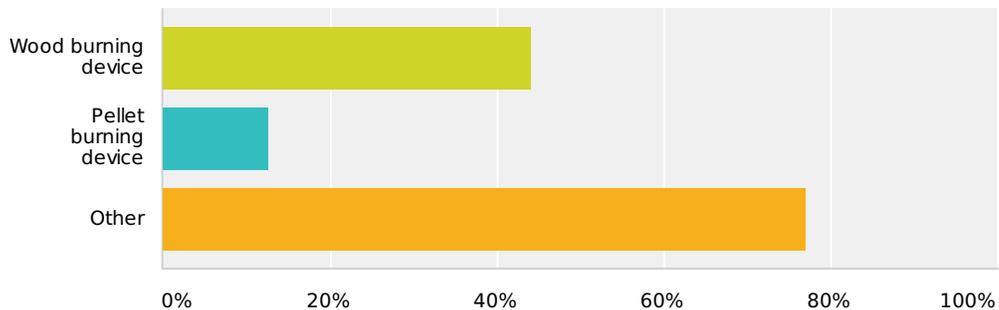
Answered: 562 Skipped: 10



Answer Choices	Responses
Yes	27.76% 156
No	67.62% 380
Not applicable	4.63% 26
Total	562

Q7 What type of heating device do you use to heat your home? (Please select multiple answers if applicable.)

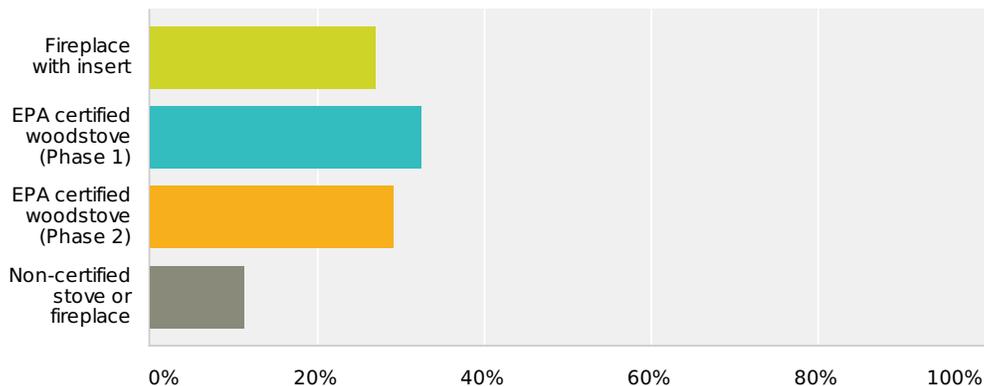
Answered: 562 Skipped: 10



Answer Choices	Responses
Wood burning device	44.13% 248
Pellet burning device	12.63% 71
Other	77.05% 433
Total Respondents: 562	

Q8 Please identify the type of wood burning appliance you use.

Answered: 240 Skipped: 332



Answer Choices	Responses
Fireplace with insert	27.08% 65
EPA certified woodstove (Phase 1)	32.50% 78
EPA certified woodstove (Phase 2)	29.17% 70
Non-certified stove or fireplace	11.25% 27
Total	240

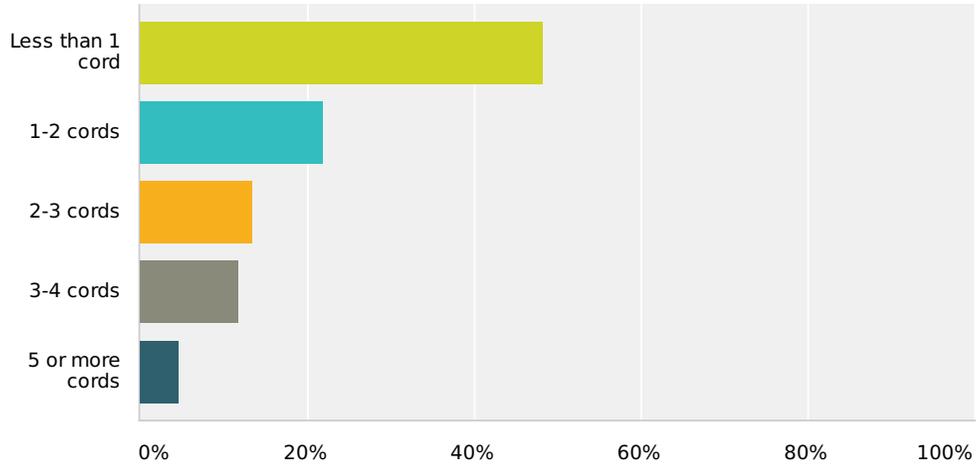
Q9 If you are able, please identify the make and model of your wood burning appliance.

Answered: 107 Skipped: 465

Answer Choices	Responses
Make:	97.20% 104
Model:	62.62% 67
Total Respondents: 107	

**Q10 How many cords of wood do you burn in an average winter season?
(A cord is understood to be 128 cubic ft. of wood or wood stacked to be 4ft x 4ft x 8ft.)**

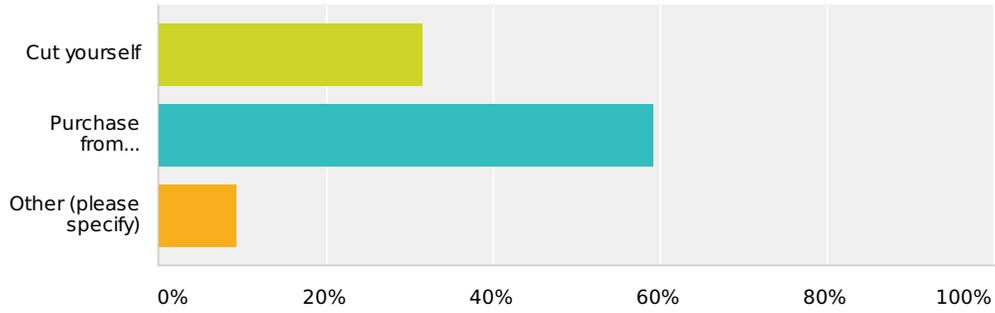
Answered: 238 Skipped: 334



Answer Choices	Responses	Count
Less than 1 cord	48.32%	115
1-2 cords	21.85%	52
2-3 cords	13.45%	32
3-4 cords	11.76%	28
5 or more cords	4.62%	11
Total		238

Q11 How do you obtain your firewood?

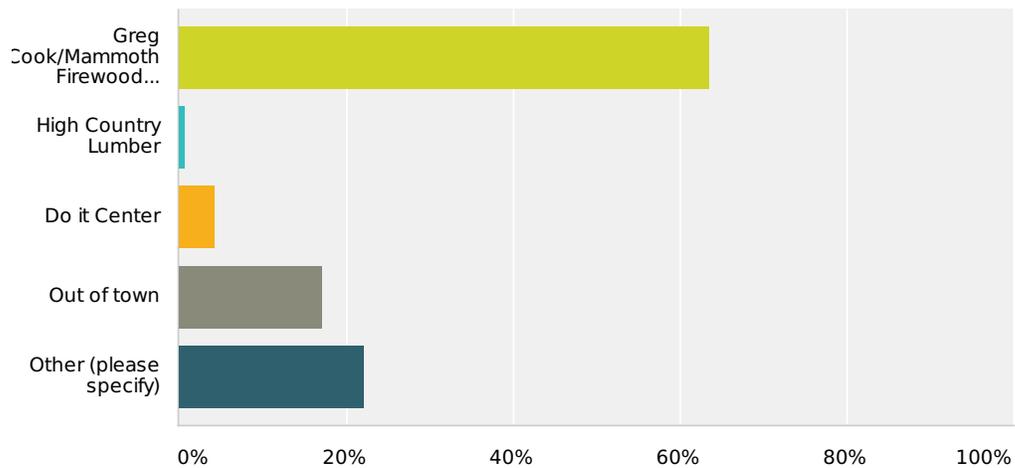
Answered: 238 Skipped: 334



Answer Choices	Responses
Cut yourself	31.51% 75
Purchase from...	59.24% 141
Other (please specify)	9.24% 22
Total Respondents: 238	

Q12 Where do you purchase your firewood from?

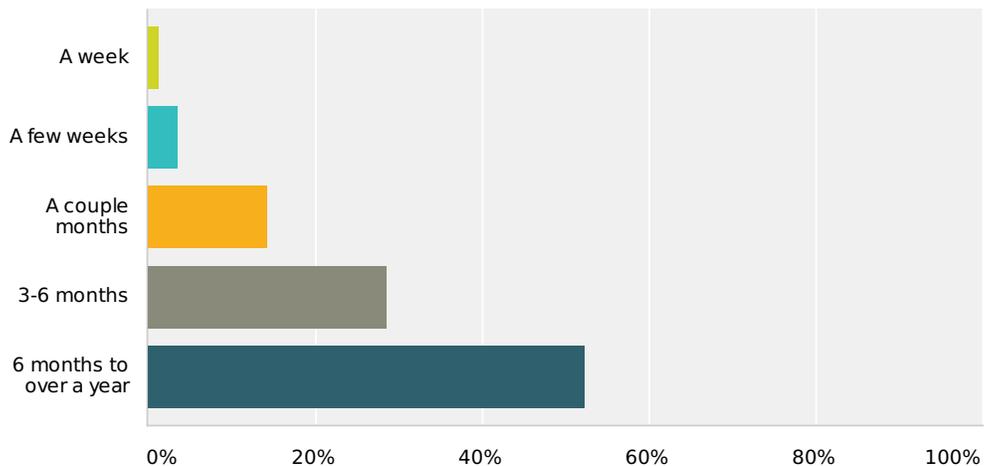
Answered: 140 Skipped: 432



Answer Choices	Responses
Greg Cook/Mammoth Firewood Company	63.57% 89
High Country Lumber	0.71% 1
Do it Center	4.29% 6
Out of town	17.14% 24
Other (please specify)	22.14% 31
Total Respondents: 140	

Q13 How long is your wood seasoned before you burn it?

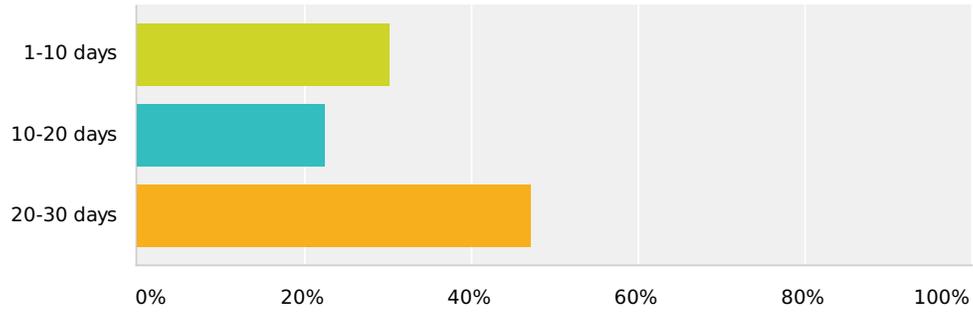
Answered: 231 Skipped: 341



Answer Choices	Responses
A week	1.30% 3
A few weeks	3.46% 8
A couple months	14.29% 33
3-6 months	28.57% 66
6 months to over a year	52.38% 121
Total	231

Q14 How many days do you burn wood during a typical winter month?

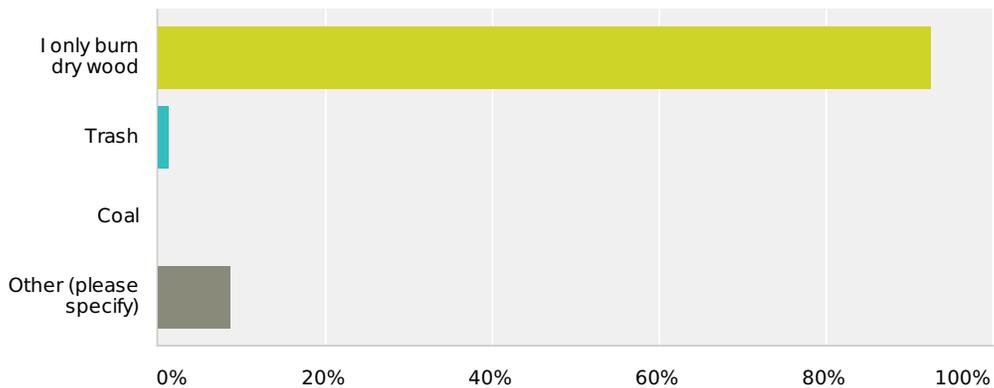
Answered: 231 Skipped: 341



Answer Choices	Responses	
1-10 days	30.30%	70
10-20 days	22.51%	52
20-30 days	47.19%	109
Total		231

Q15 Do you burn anything other than dry wood in your stove?

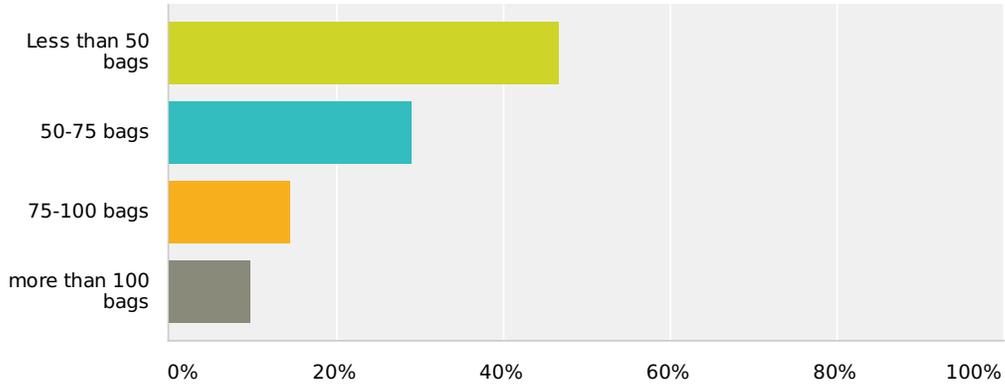
Answered: 231 Skipped: 341



Answer Choices	Responses
I only burn dry wood	92.64% 214
Trash	1.30% 3
Coal	0% 0
Other (please specify)	8.66% 20
Total Respondents: 231	

Q16 How many bags of pellets do you use in an average winter season? (A pallet of pellets equals 1 ton and there are 50 bags in a ton. One bag is equal to 40lbs.)

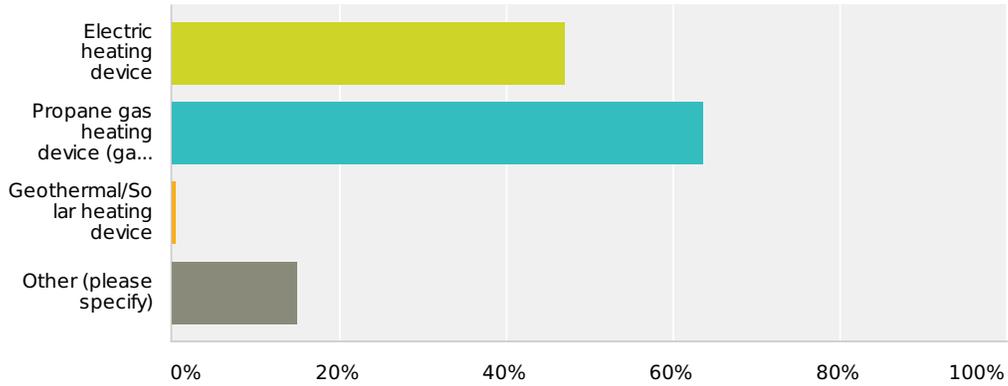
Answered: 62 Skipped: 510



Answer Choices	Responses
Less than 50 bags	46.77% 29
50-75 bags	29.03% 18
75-100 bags	14.52% 9
more than 100 bags	9.68% 6
Total	62

Q17 Please specify your alternative heat source. (Please select all choices that apply.)

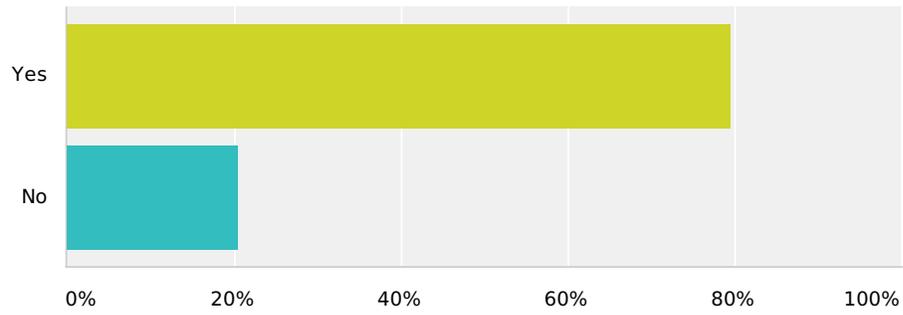
Answered: 253 Skipped: 319



Answer Choices	Responses
Electric heating device	47.04% 119
Propane gas heating device (gas fireplace, insert, logs, etc.,)	63.64% 161
Geothermal/Solar heating device	0.40% 1
Other (please specify)	15.02% 38
Total Respondents: 253	

Q18 Are you aware that the town calls no burn days when the air quality is forecasted to be poor?

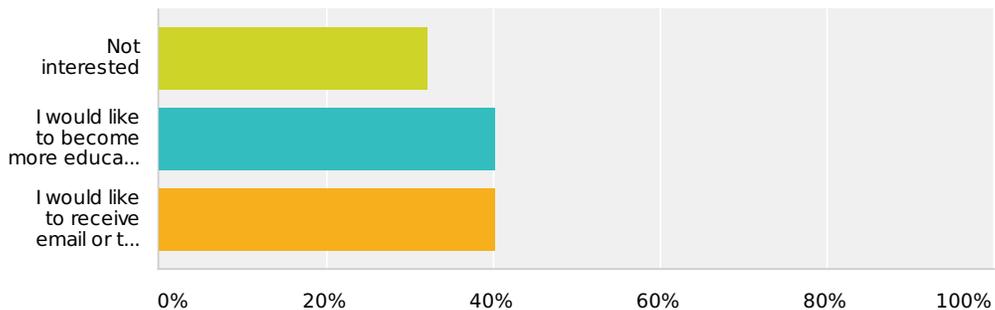
Answered: 541 Skipped: 31



Answer Choices	Responses	
Yes	79.48%	430
No	20.52%	111
Total		541

Q19 Would you be interested in improving the air quality in Mammoth Lakes?

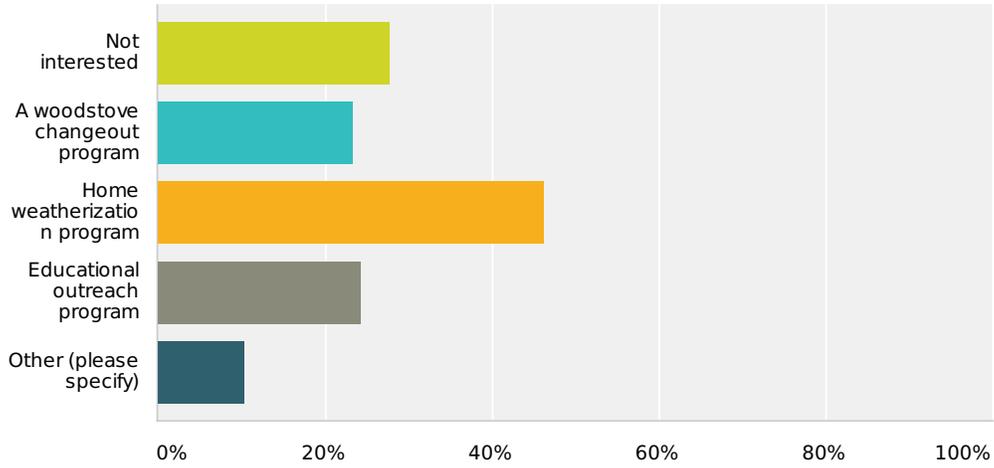
Answered: 541 Skipped: 31



Answer Choices	Responses
Not interested	32.16% 174
I would like to become more educated in proper burning techniques.	40.30% 218
I would like to receive email or text updates on burning restrictions and no burn days.	40.30% 218
Total Respondents: 541	

Q20 If the town developed a program to reduce emissions I would be interested in participating in the following choices...

Answered: 540 Skipped: 32



Answer Choices	Responses	
Not interested	27.78%	150
A woodstove changeout program	23.33%	126
Home weatherization program	46.30%	250
Educational outreach program	24.26%	131
Other (please specify)	10.37%	56
Total Respondents: 540		

Q21 Thank you for completing the home heating survey. Enter the following information for a chance to win a Von's gift card! (Please enter physical address and include unit number to ensure that the Town does not receive duplicate entries. Please provide your name for your chance to win \$150 gift card to Von's.)

Answered: 490 Skipped: 82

Answer Choices	Responses	
Name:	100%	490
Company:	0%	0
Address:	100%	490
Address 2:	61.22%	300
City/Town:	0%	0
State:	0%	0
ZIP:	0%	0
Country:	0%	0
Email Address:	97.76%	479
Phone Number:	100%	490
Total Respondents: 490		