City of Fort Collins Air Quality Survey

2007

The purpose of this survey and report was to provide the City of Fort Collins with an assessment of the knowledge, attitudes, perceptions and behavior of a representative sample of residents concerning outdoor air quality. For the 2007 survey, additional questions included global warming, mandatory vehicle emissions testing to protect the ozone, and recycling.

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BACKGROUND

The City of Fort Collins' Air Quality Plan (AQP) identifies air quality in Fort Collins to be an issue of significant importance to the city. The City of Fort Collins performs a survey of the general population to assess (1) the appropriateness of the priorities listed in the City's current AQP; (2) to help define the questions that will give direction to policy, planning, outreach and marketing; (3) to help staff assess current programs and to plan future actions; and (4) to address any other temporary and current air quality issues. The current survey is focused on outdoor air quality and sustainability; ozone level reduction; global warming and solid waste reduction programs and issues.

A person's sense of perceived control is a powerful factor in the likelihood of both attitude and behavior change. Outdoor air quality is in the control of many, not just the respondent. Therefore, a community survey could ask what actions the respondent takes to improve outdoor air quality, but the impact of individual actions is better addressed using objective air quality and traffic monitoring techniques. However, a perception and attitude survey can add to this information by informing the policy makers and planners where their actions and programs might be most effective by measuring the respondent's individual (beliefs, knowledge), social (attitudes), cultural (community norms) and situational (amount of perceived control) variables that go into predicting the intent to act in either pro- or non pro-environmental ways in their community. This is the purpose of this survey.

EXECUTIVE SUMMARY

Executive Summary

The City of Fort Collins Air Quality Survey-Spring 2007 was conducted in March and April of 2007. Of the 1,500 surveys sent to a random sample of residents of Fort Collins by mail, an adequate response rate occurred for a total of 577 returned and completed, or 38%. The summary of survey objectives is listed in the previous section of the Executive Summary.

- To determine the effectiveness of the City's Air Quality information programs and events, respondents were asked if they recalled "hearing about" or "participating in" some of the current and recent programs. In response, results found the most "Participated" and "Heard of It" programs were the *Christmas Tree* collection (86%), *Anti-Idling Campaign* (51%) and the *Leaf Exchange* (49%). The *ClimateWise* program for businesses is showing a steady increase in awareness and participation over the past five years.
- More than half of the respondents (62%) had seen the billboards at railroad crossings encouraging motorists to turn off their engines while a train passed. When compared to the 2004 survey, only 45 percent had responded "Yes" to this question.
- *Utility bill inserts* (52%) and the *local newspaper*s (37%) remained the strongest sources of information passed from the City to the residents about air quality information. *Word of Mouth* increased from 2004 (9%) to 2007 (18%) as well as *Fliers and Brochures*: 2004 (12%) to 2007 (21%).
- Most residents believe that they do have a personal obligation to help improve the air quality in Fort Collins (93%); they know what changes they can make to help the air quality (79%) and they believe these changes will make a difference (86%). However, they do not believe their neighbors will act to positively influence the air quality in Fort Collins (69%).
- An equal percentage believes that air pollution in Fort Collins obscures mountain views. Almost half believe it <u>is</u> bad enough to adversely impact the economy (46%); yet, almost half do <u>not</u> believe that it makes the air smell bad (45%). The majority of the respondents believe the air quality negatively influences health problems (60%) and the environment (58%). Very few residents stated that indoor air pollution was a problem (29%).
- 76% believe that global warming is a serious problem.
- The most frequently chosen response regarding *where* residents believe the City should focus efforts to best address air quality issues in Fort Collins was to *Improve Traffic Light Timing to Reduce Vehicle Idling at Lights* (73% "Strongly Agree"). However, outside of *Do more to control indoor air pollution in Fort Collins* all statements were overwhelmingly more "Agree" than "Disagree."
- Almost half (48%) of residents state that air pollution in Fort Collins affects them in some negative way (allergies, respiratory, visually, indoor air).
- The biggest concern around the adverse impacts of poor air quality is visibility, which C*auses a "Brown Cloud*" (67%) and *Obscures Mountain Views* (55%) which are similar to the 2004 survey, but considerably lower than results from the 2001 survey: 80 and 87 percent, respectively.
- The top action residents would be willing to take "frequently" to help reduce air pollution in Fort Collins is to keep their *vehicles tuned up* (67%). Again, 76 percent of the respondents stated they would "never" take the bus for errands or work (81% in 2004). Two of the

changes from 2004 to 2007 were small, but positive in *Make small changes in my life* (75% to 84%) and *Reduce the number of miles I drive my vehicle* (65% to 77%).

- One quarter (25%) have at some time or another experienced unacceptable air quality in Fort Collins. This number has decreased from the previous two surveys.
- Most of the respondents believe something *can* be done (81%) and *should* be done (80%) to maintain or improve the outdoor air quality in Fort Collins.
- Most of the respondents "Agree" that the Earth is getting warmer (global warming) (83%). The majority believe that human caused emissions cause global warming (74%), that individual choices can reduce it (78%), governments should both enable citizens and businesses through programs (79%) and by enacting legislation and regulations (69%). However, they do not believe that technology will solve the problems without individuals changing their behaviors (79%); yet, they do NOT believe nothing can be done to reduce it (73%).
- Approximately half of the respondents park their cars in a garage and do not warm it up at all (47%), 19% warm it up for 0-2 minutes, 13% for 3-5 minutes, and very few (5%) warm it up more than five minutes.
- Half of the respondents (50%) will occasionally turn their vehicle motor off while they are waiting for a train to pass; 30% will always; and, 20% never turn it off.
- Most respondents with a wood burning device in their homes did not know (40%) how old it was and the median age fell between 11 and 40 years (50%).
- The percent of respondents in this survey that had a wood-burning device was 10% as compared to 11% in 2004.
- Of those respondents with a wood burning device, 49% did not use it last year; 25% used less than a cord of wood; 14% used ¼ to ½ of a cord and 12% used more than a ½ a cord.
- Most respondents either burned no wood or a very small amount of wood in their stoves or fireplace.
- The most common additional heating units in homes are wood-burning fireplaces (23%) or gas fireplaces (34%).
- Half of the gas fireplaces were reported as certified and 10 percent of the wood-burning fireplaces were reported as certified.
- The type of heating unit used most for heating needs was the *gas fireplace* (51 percent of respondents for less than 25% of the total heating needs).
- The category of "Other" was new to this year's survey and could indicate sources such as solar (1.6%).
- The use of gas devices as heating sources rose markedly from 2004 to 2007 with *Gas Fireplaces* increasing from 16% to 34% and *Gas Stoves* increasing from 5% to 11%. Another large increase was in the percent of respondents reporting an *Electric Fireplace* from 2004 (0.8%) to 2007 (4.9%). 2007 was a cold winter.
- Only the *gas stove* provided over 50 percent of the heating needs by 11 percent of the respondents.
- 14 percent of respondents report a radon mitigation system in their home.
- Almost half of respondent's homes (40%) have been tested for radon.
- Of those who purchased a home in the past 12 months (4%), 70 percent received a brochure with radon information.

- One third (35%) were aware that new homes in Fort Collins are required to have radon mitigation systems built in.
- Residents perceive *Gasoline Vehicles* (82%) and *Diesel Vehicles* (80%) to be the major sources of outdoor air pollution in Fort Collins.
- An equal percentage of residents perceive *Wood smoke* to be a serious or not serious pollutant.
- *Ozone* is considered by 63 percent as a serious pollutant with a full 22 percent that do not know and 16 percent rated it as not serious.
- Slightly more than half (54%) of respondents would support a *mandatory vehicle emissions* program in Fort Collins even though the federal government no longer requires it.
- The majority of respondents (67.6%) always use the curbside recycling services.
- Large proportions of respondents do not know how, or can not recycle *Yard Waste* (15%) or *Electronics, such as old computers* (18%).
- The majority of respondents agree the City of Fort Collins should *Require larger recycling containers* (63%); *Provide more information about how/where to recycle* (90%); *Ask businesses to recycle more* (89%); *Do more to reward people who recycle* (85%); and, *Inform people that signing up for lower levels of trash service will lower their rates* (83%). However, almost one-quarter (21%) of respondents disagree that larger recycling containers are needed.
- Demographics
    - There were less male respondents (39%) than females (61%).
    - The majority fall between 26 and 65 years of age (77%).
    - 46% were part of two-member households.
    - 29% stated that a member of the suffered with a respiratory ailment.
    - 36% lived in Fort Collins over 20 years.
    - Most are college educated (67%).
    - Most earn a median family income over $40,000 (58%).
    - The largest source of income was employment outside the home (49%).
    - 75% owned their own home.

Recommendations are to closely examine the marketing efforts that citizens consistently recognize and expand on them. Citizens also need to better understand the positive impacts they can make as individuals. Continuation of the vehicle emissions program should be carefully considered due to barely half of the respondents supporting it. Ozone, however, could use more education shown by the large percentage that did not know of its impact. With expanded education efforts and citizen knowledge, the percentage supporting the vehicle emissions program may grow. Wood smoke, as an issue, appears to be diminishing. Indoor air pollution is also not a large issue.

Survey Sample

Response Rate

The City of Fort Collins Air Quality Survey was conducted in March and April of 2007. The survey used a non-experimental design (survey) with a stratified (by zip code) random sampling of 1,500 residents of the city of Fort Collins. The survey was a mail survey using the Total Design Method (Dillman, 1978) of surveying in order to achieve a higher response rate. Data were read into a Scantron scanner for accuracy, and results were analyzed using SPSS 15.0 for Windows. A total of 577 completed surveys were returned, for a response rate of 38%.

Selecting the Sample

The method used to select a sample for the surveys was stratified random sampling. In random stratified sampling, there is some sub-group in a population that is of interest and can be identified. The sub-groups in a community survey are frequently identified by zip codes. The zip codes in Fort Collins represent various regions of the city. If we had selected a simple random sample of 1,500 residents, we might not have obtained a representative sample from one or more of the zip codes, or regions of the City. Fort Collins has five zip codes and two post office box zip codes. Five of the zip codes (80521, 80524, 80525, 80526, 80528) are approximately equally represented in population numbers. The two post office box zip codes are 80522 in the old post office building downtown, and 80527 in the newer post office building on the south end of town. There is another zip code in Fort Collins (80523) that is exclusive to Colorado State University. No surveys were mailed to 80523. This does not mean the survey excluded students. The only students excluded were ones living on campus in resident halls, dormitories or campus housing. Students living off campus had an equal chance to be included in the survey. Surveys were mailed proportionately to each zip code (excluding 80523).

Stratified Random Sampling of 1,500 Surveys by City of Fort Collins' Zip Codes

Zip Codes	Number of Surveys Mailed
80521	300
80524	300
80525	300
80526	300
80528	300

An up-to-date, accurate "resident" mailing list was obtained through a reputable local mailing list company. The mailing list company was directed to randomly sample from the above zip codes. A computer based record system was used to generate the random list.

Determining Sample Size

The following formula was used to determine the size of sample necessary to meet the above criteria:

$$n = (t)^2(p)(q)/d^2$$

$$(1.96)^2(.5)(1-.5)/.04^2 = \mathbf{600}$$

Where:

n = sample size needed

t = 1.960 for a 95% confidence limit

p = the proportion estimate (e.g., .50)

q = (1 - p)

d = margin of error (degree of precision, or 4%)

In other words, a sample of 600 returned surveys would be an adequate sample at a confidence level of 95%, a margin of error of 4%, and a probability of 0.5. In this example, the survey's response rate was 38%.

The response rate for the 2007 Fort Collins Air Quality survey, 576 responses, was close enough to the calculated 600 sample size.

A 95% confidence level is an extremely stringent confidence level and is common in choosing sample sizes when asking questions about health or behavior. When asking questions about economic or environmental issues, a more common confidence level would be 90%. As such, though we did not get as good of a return as in previous years, the 577 is still well within an acceptable number of responses.

METHOD

Survey Procedure

The framework for implementing the 2007 Outdoor Air Quality survey followed a modified Total Design Method (TDM) developed by Don Dillman (1978). Among other techniques, this method makes use of mailings that both inform potential respondents of forth-coming surveys and remind them to answer and return the survey materials. Typical response rates using this method range from 60% to 99%, depending on the perceived importance to the respondent, and the length of the questionnaire. These rates meet established standards of "very good" (Babbie, 1973; as cited in Edwards, Thomas, Rosenfeld & Booth-Kewley, 1997).

Outline of Survey Procedure

A. Tasks completed before sending out the survey:
    1. Obtained input from Fort Collins Air Quality Advisory Board
    2. Chose random sample and determined sample size
    3. Developed surveys, scanning software, and database to score surveys
    4. Ordered surveys and address labels
    5. Ordered envelopes, postcards, letters (cover, introductory, and second letters)
    6. Generated address label database to keep track of respondents
    7. Developed database for survey responses
    8. Sent introductory letter (see Appendix A)
B. Sending out the survey (see Appendices B, C and D):
    1. Prepared return envelopes
    2. Prepared survey packet
    3. Sent survey packet
C. Sending out reminder letters:
    1. Sent reminder postcard (see Appendix E)
    2. Sent second copy of the survey with a follow-up cover letter on to non-respondents (see Appendix F)
D. Established a final date to accept completed surveys.

Detailed Results

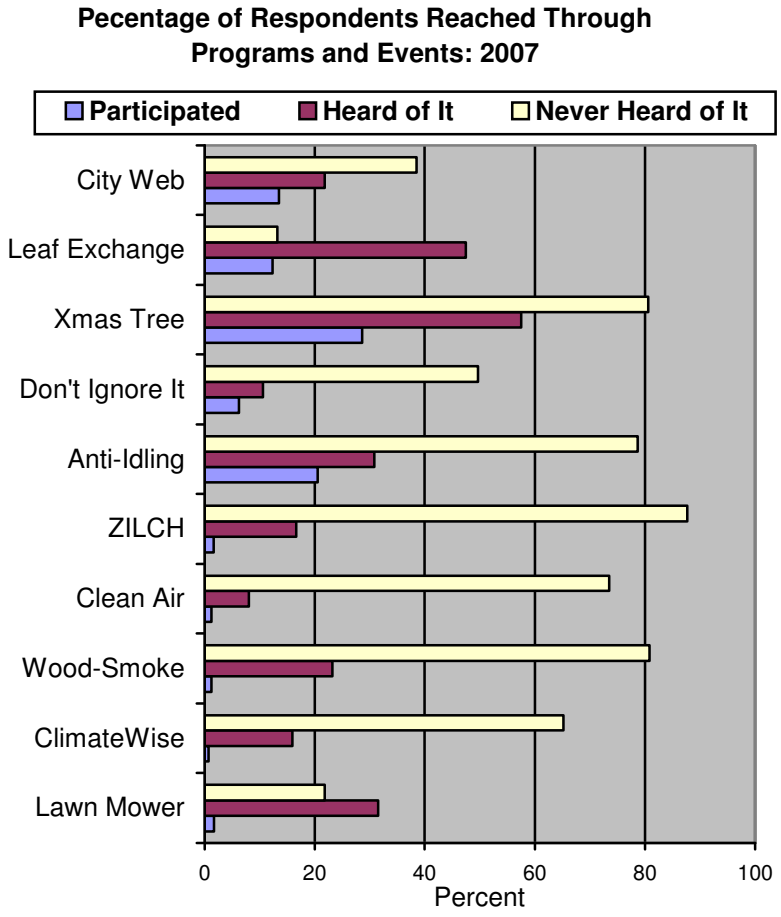
Air Quality Survey Results

Q1. In order to address air quality and environmental issues, the City offers a variety of specific programs and events. Do you recall hearing about or participating in any of the following? (Mark all that apply.)

Table 1. Percentage of Respondents Hearing or Participating in City Programs or Events

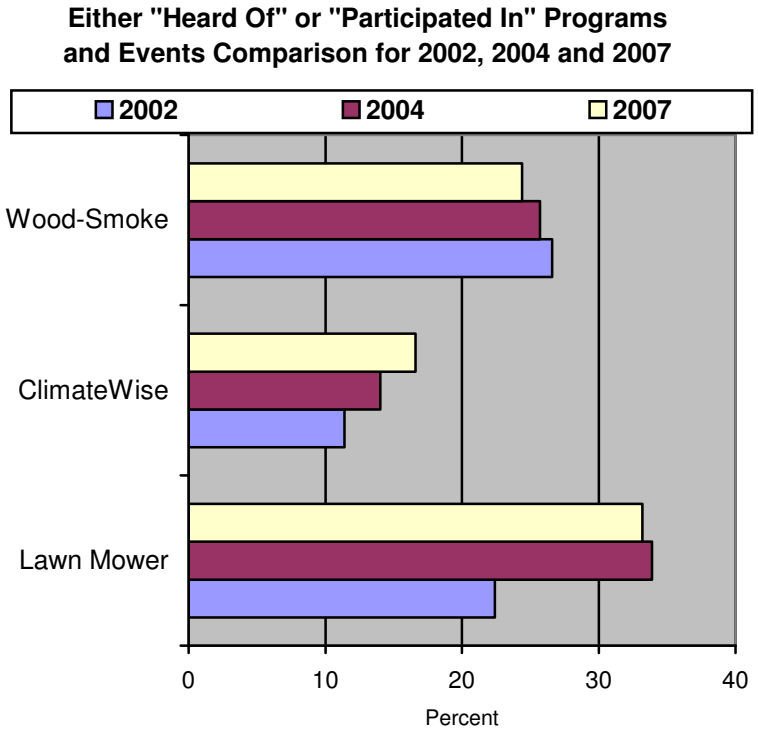
Program	Participated	Heard of it	Never Heard of it
Lawn mower rebate program	1.7	31.5	21.8
ClimateWise program for businesses	0.7	15.9	65.2
Wood-smoke complaint line	1.2	23.2	80.8
Clean Air Track to Win	1.2	8.0	73.5
Zero Interest Loans for Conservative Help (ZILCH)	1.6	16.6	87.7
Anti-Idling Campaign	20.5	30.8	78.7
"Don't Ignore It" (Check engine light campaign)	6.2	10.6	49.7
Christmas Tree collection	28.6	57.5	80.6
Leaf exchange	12.3	47.5	13.2
City web-page recycling directory	13.5	21.8	38.5

The first set of questions focused on specific air quality programs or campaigns currently in place in the City of Fort Collins. By measuring marketing success, the responses can help City planners identify *where* resources may have had a good impact or may warrant more focus in the upcoming years. This list is updated as needed for each survey year. (The percentages across do not add up to 100 percent as a respondent had the opportunity to mark all that applied and may have marked both "Participated" and "Heard of it.")



Results found the most "Participated" and "Heard of It" programs were the *Christmas Tree* collection (86%), the *Leaf Exchange* (58%), and the *Anti-Idling Campaign* (51%) . The *City*

Web Page Recycling Directory also had strong participation.

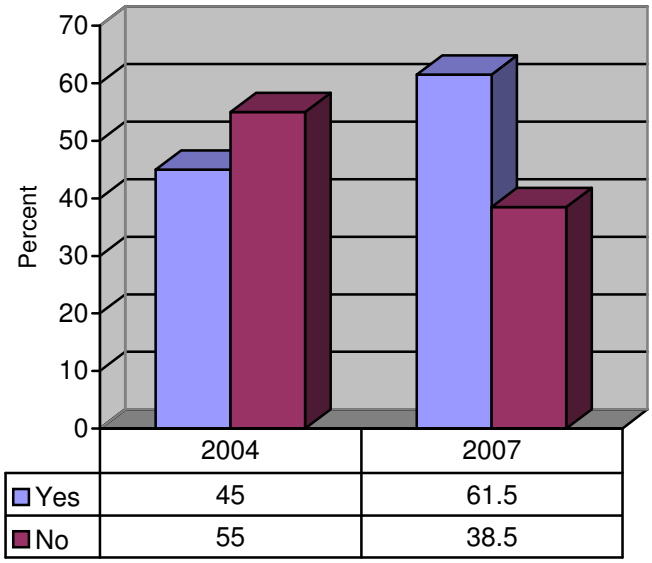


New to this year's survey was the *City Web-Page Recycling Directory, Leaf Exchange, Christmas Tree collection, Don't Ignore It, Anti-Idling Campaign, Zero Interest Loan for Conservative Help (ZILCH) and Clean Air Track to Win.*

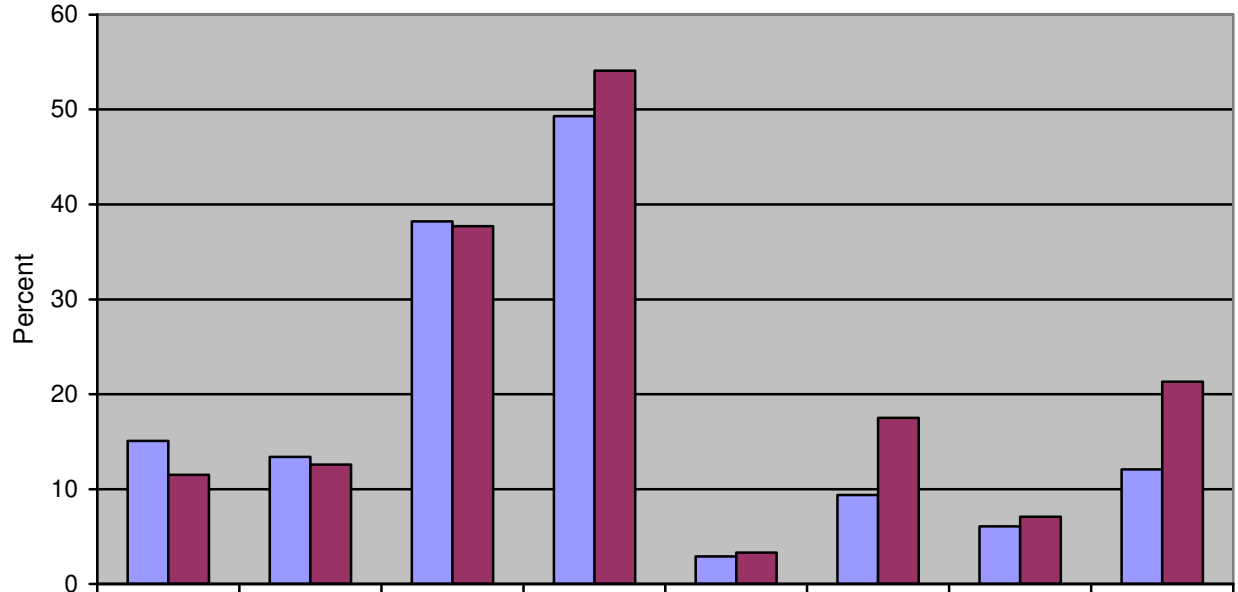
Comparing the three 2007 Programs and Events to those also measured in the 2002 and 2004 survey found little change from 2004 to 2007 in the *Wood Smoke* complaint line or the *Lawn Mower* rebate program. However, the *ClimateWise* program for businesses is showing a steady increase in awareness and participation in the past five years.

Q2. Did you see or hear about the signs at railroad crossings encouraging you to turn off your engine while a train passes?

More than half of the respondents had seen the billboards at railroad crossings that encouraged motorists to turn off their engines while a train passed. When compared to the 2004 survey, only 45 percent had responded "Yes" to this question.



Q3. If you recall seeing any information about air quality issues in Fort Collins from the following sources, please indicate. (Mark all that apply.)



	TV	Radio	Local Newspaper	Utility Bill	Internet	Word of Mouth	AQ Program/Event	Fliers/Brochures
2004	15.1	13.4	38.2	49.3	2.9	9.4	6.1	12.1
2007	11.5	12.6	37.7	54.1	3.3	17.5	7.1	21.3

Education around natural resources in the City of Fort Collins is a significant part of the City's department of Natural Resources. This question remains a reliable indication of the success of these methods to disseminate information. Very little change could be seen from 2004 to 2007 in the source of where the air quality information was seen by the respondents. Interestingly, *Word of Mouth* increased slightly from 2004 (9.4%0 to 2007 (17.5%). As it has in the past few surveys, the *Utility Bill Insert* (54%) remains the strongest mechanism of providing air quality information to the citizens of the City of Fort Collins. There was a substantial increase in *Fliers and Brochures* as a source of information from 2004 (12.1%) to 2007 (21.3%).

The next scale, or set of questions, gets at the resident's belief of how important the issue of air quality in Fort Collins is to him or her. The questions are based on three factors: (1) statements of how adverse or broad they believe the air quality problem in Fort Collins is (attitudes, beliefs); (2) their perception of what type of actions other residents may make (social norms), and (3) how much difference actions they may take would make (perceived control). According to the Theory of Planned Behavior, the sum of responses to these questions should give a general idea of whether or not the resident may actually act in a pro-environmental fashion. In other words, if the residents generally agreed that there was a problem, their neighbors and friends believed there was a problem, and they could actually do some things to alleviate the problem—they would be more likely to do so. This scale can tell planners an overall "intent to act/behave"

instead of a series of single statements that really do not measure any factor that can help planners.

By applying multiple regression to this scale, we can determine which statements impact the respondents' intent to act in a pro-environmental way, or to "feel a personal obligation to help improve the air quality in Fort Collins." The remaining statements in this scale were applied in a regression analysis to determine the effect of each on the first statement: *I feel a personal obligation to help improve the air quality in Fort Collins.* This means that each subsequent statement in the scale was measured as to how much of an effect it had on that belief. For example, the statement: *Many of the people I know in FC will not be willing to change,* was not significant, but it was negatively correlated with the predictor. In other words, those that believed they had a personal obligation to make changes to help AQ, were more likely to disagree that other would change. Intent to act is not the same as actual action. However, intent is the closest variable that can be measured outside of actually measuring behavior. In this scale the intent is the personal obligation to help improve the air quality in Fort Collins.

Table 2 shows that the statements: *I Know what small changes I could make in my life to help Air Quality in Fort Collins; I feel that small changes I make can affect the Air Quality in Fort Collins* and *Air Pollution in Fort Collins is significant enough to hurt the environment* were significant predictors of whether a respondent would feel a personal obligation to help improve air quality in Fort Collins.

Table 2. Coefficients, Beta Weights and Significance for Intent to Help Improve the Air Quality in Fort Collins.

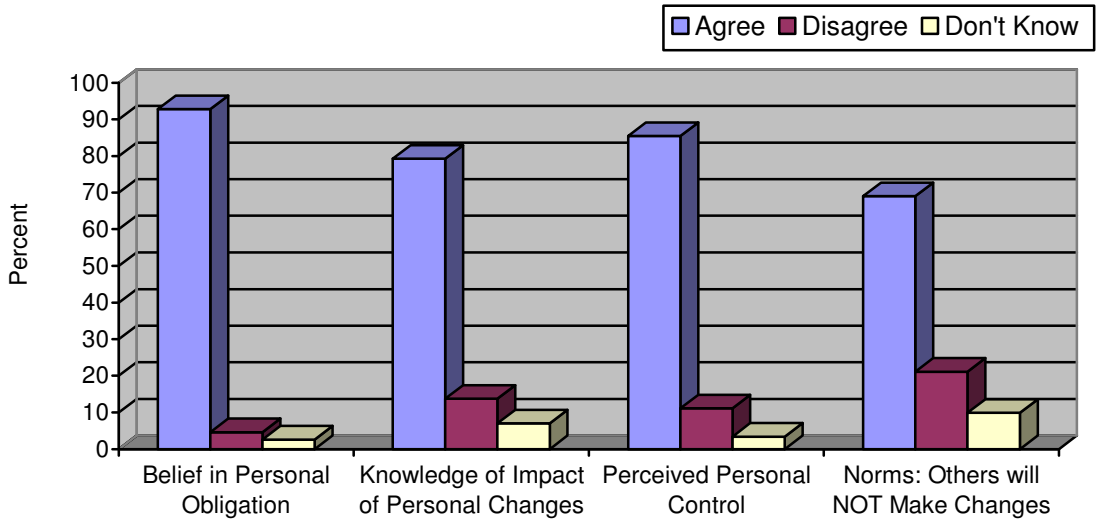
	t	Sig.
I Know what small changes I could make in my life to help AQ	4.896	.000
I feel that small changes I make can affect the AQ in FC	8.817	.000
Many of the people I know in FC will not be willing to change.	-.766	.444
Mountain views are obscured by the AP in FC.	.523	.601
Indoor AP is a problem in my home.	-1.488	.137
AP in FC hurts the local economy.	.838	.402
AP in FC makes the air smell bad.	1.459	.145
AP in FC is significant enough to cause human health problems.	-.940	.348
AP in FC is significant enough to hurt the environment.	3.847	.000

Q4. Please indicate how strongly you agree/disagree with each of the following:

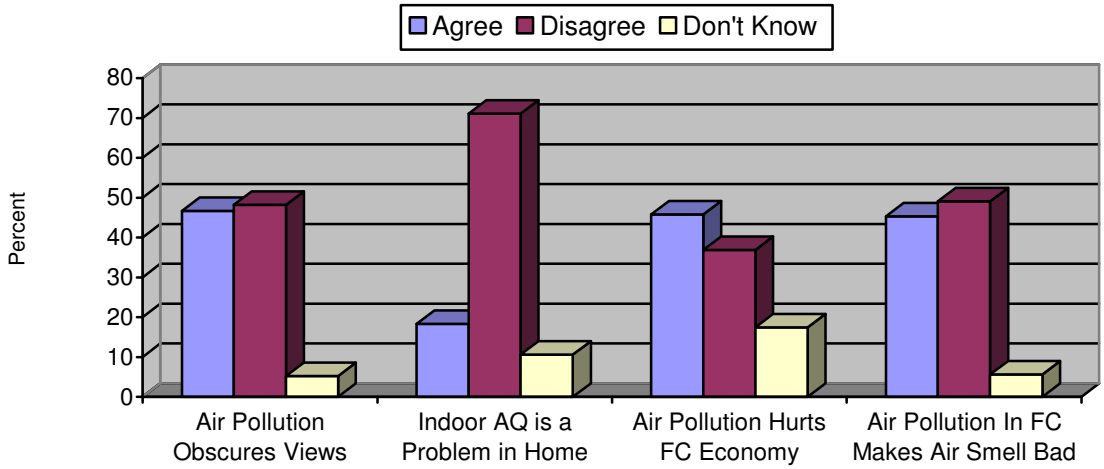
Table 3. Percent Respondents' Personal Beliefs, Attitudes, Norms and Perceived Control Concerning Air Quality.

Statements	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
I feel a personal obligation to help improve the air quality in Fort Collins.	54.9	37.9	3.2	1.4	2.6
I know what small changes I could make in my life to help air quality.	37.1	42.2	10.5	3.2	7.0
I feel that small changes I make can affect the air quality in Fort Collins.	44.6	40.9	9.5	1.6	3.4
Many of the people I personally know in FC will NOT be willing to change their day-to-day transportation habits to improve air quality.	24.3	44.7	15.7	5.4	9.8
Mountain views are obscured by the air pollution in Fort Collins.	14.2	32.5	31.3	16.9	5.2
Indoor air pollution is a problem in my home.	5.4	12.9	26.1	45.0	10.6
Air pollution in FC hurts the local economy.	13.9	31.9	26.9	10	17.4
Air pollution in FC makes the air smell bad.	15.5	29.8	35	14.1	5.6
Air pollution in FC is significant enough to cause human health problems for at least some of the residents.	17.9	41.7	19.2	5.8	15.5
Air pollution in FC is significant enough to hurt the environment.	23.6	34.6	22.2	7.6	12.1
Global warming is a serious problem.	54.2	21.9	5.6	10.7	7.7

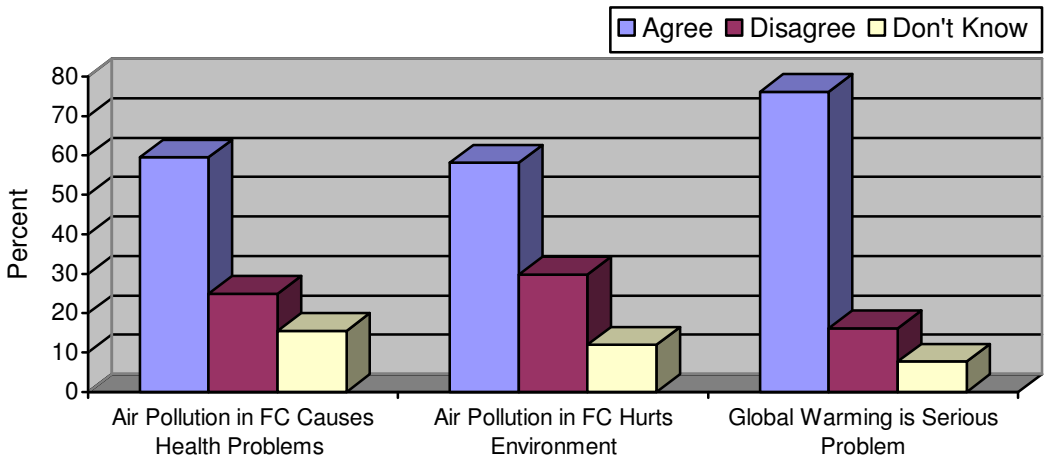
Q4 continued: Respondents' personal beliefs, attitudes, norms and perceived control concerning air quality.



Results found most respondents "Agree" with *I feel a personal obligation to help improve the air quality in Fort Collins* (92.8%)*; I know what small changes I could make in my life to help air quality* (79.3%)*; I feel that small changes I make can affect the air quality in Fort Collins* (85.5%) and *Many of the people I personally know in Fort Collins will not be willing to change their day-to-day transportation habits to improve air quality* (69%).



Further results found that almost an equal number of respondents "Agree" (46.7%) and "Disagree" (49.2%) that *Mountain views are obscured by the air pollution in Fort Collins.* Most respondents "Disagree" (71.1%) that *Indoor air pollution is a problem in my home.* Slightly more "Agree" (45.8%) than "Disagree" (36.9%) that *Air pollution in Fort Collins hurts the local economy* and slightly more "Disagree" (49.1%) than "Agree" (45.3%) that *Air pollution in Fort Collins makes the air smell bad.*



Finally, more respondents "Agree" that *Air pollution in Fort Collins is significant enough to cause human health problems for at least some of the residents* (59.5%) and *Air pollution in Fort Collins is significant enough to hurt the environment* (58.2%). Almost three times as many respondents "Agree" that *Global warming is a serious problem* (76.1%) than "Disagree" (16.2%).

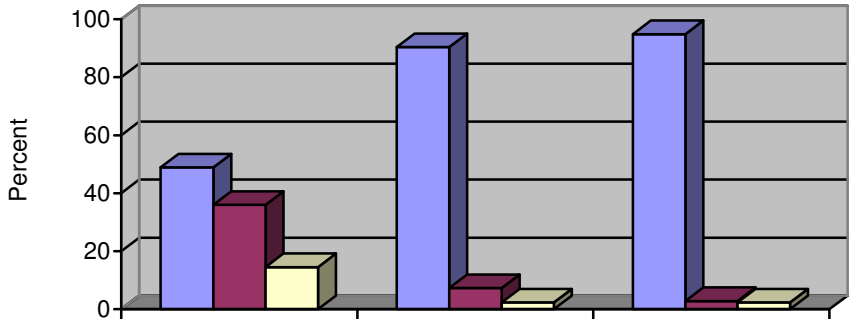
The main focus of Question 5 is to determine where the City should focus air quality programs and plans. Responses should help planners focus efforts where they will be easily and readily accepted. Clearly, *improving traffic light timing* was selected as the top action the City should take (see Table 4). Outside of *Do more to control indoor air pollution in Fort Collins* all statements were overwhelmingly more "Agree" than "Disagree."

Q5. To help control air quality in Fort Collins, City air quality programs and plans should:

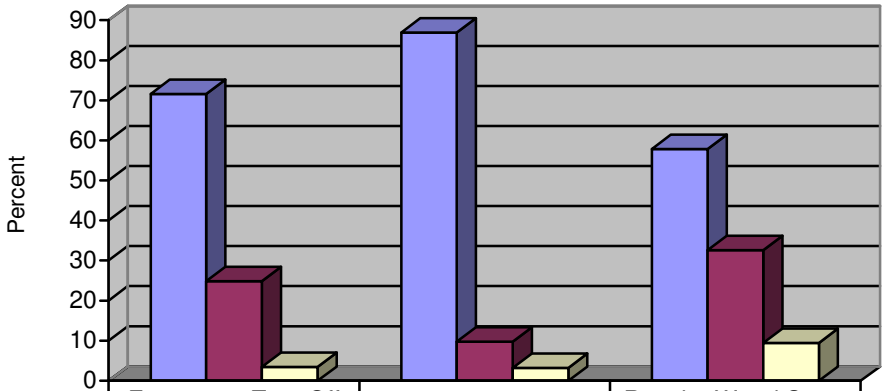
Table 4. Participants' Belief of What the City Should Do To Improve the Air Quality

Statements	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
To help improve air quality in Fort Collins, City air quality programs and plans should…					
Do more to control indoor air pollution in Fort Collins.	12.1	36.8	24.6	12	14.5
Do more to control outdoor air pollution in Fort Collins.	43.5	46.9	4.6	2.7	2.3
Improve traffic light timing to reduce vehicle idling at lights.	72.5	22.4	2.3	0.5	2.3
Encourage drivers to turn off vehicles at any wait longer than 1 minute.	38	33.6	17.4	7.4	3.5
Promote the use of alternative fuel vehicles.	56.1	30.8	7.8	2.0	3.2
Require non-certified wood stoves to be removed/replaced at time of home sale.	31.5	26.3	17.2	15.4	9.5
Do more to reduce local greenhouse gas emissions that affect global warming.	46.1	35.4	7	6.3	5.1
Prohibit wood-burning on high-pollution days.	52.8	29.9	9	6	2.3
Do more to reduce the "Brown Cloud" and improve visibility.	51.4	36.2	5.8	2.1	4.4

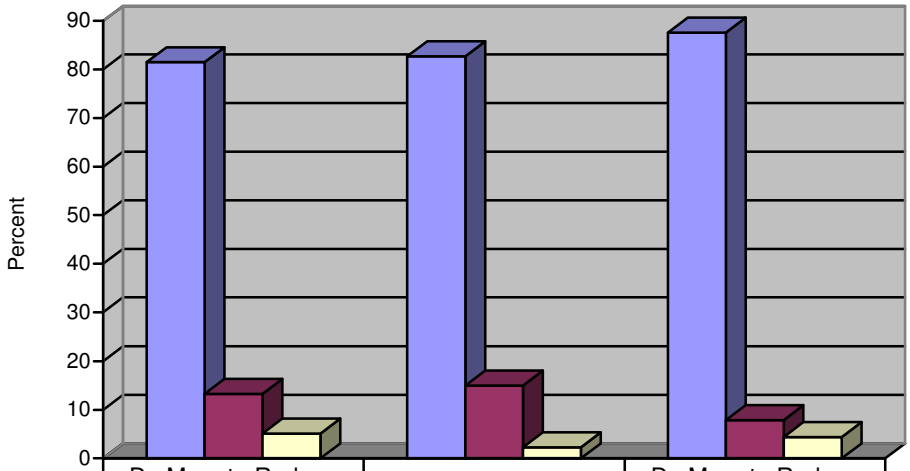
Q5 continued: Respondents' belief in city obligations to improve/maintain air quality.



	Do More: Indoor Air Pollution	Do More: Outdoor Air Pollution	Improve Traffic Light Timing
Agree	48.9	90.4	94.9
Disagree	36	7.3	2.8
Don't Know	14.5	2.3	2.3



	Encourage Turn Off Vehicles at Wait >1 Minute	Promote Alternative Fuel Vehicles	Require Wood Stove Removal/Replacement at Home Sale
Agree	71.6	86.9	57.8
Disagree	24.8	9.8	32.6
Don't Know	3.5	3.2	9.5



	Do More to Reduce Local Greenhouse Gases	Prohibit Wood-Burning on High-Pollution Days	Do More to Reduce Brown Cloud/Improve Visibility
Agree	81.5	82.7	87.6
Disagree	13.3	15	7.9
Don't Know	5.1	2.3	4.4

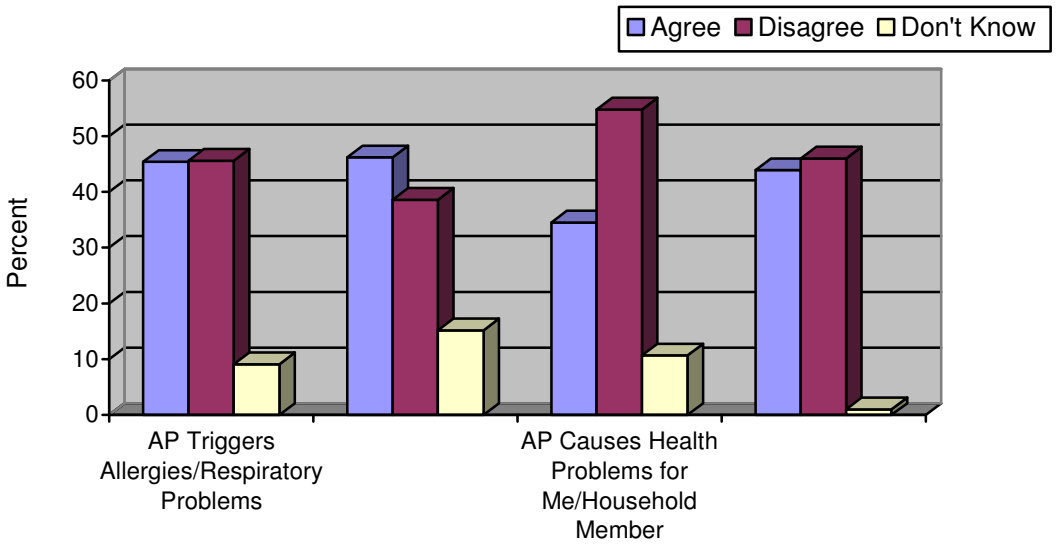
Question 6 provides the respondent with a set of statements designed to measure perceptions of how the air quality in Fort Collins affects their lives.

Q6. Air Pollution in Fort Collins affects me because it…

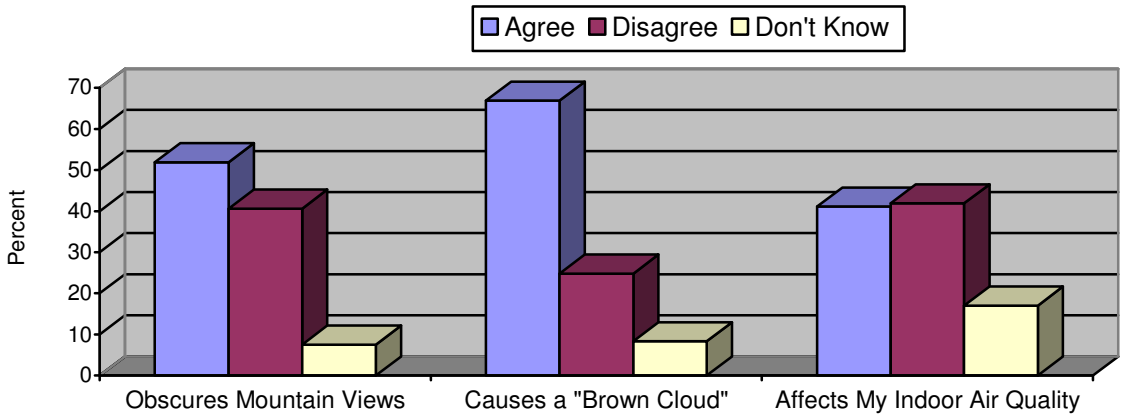
Table 5. Percent Affect of Air Pollution to the Respondent.

Statements	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
Triggers allergies or respiratory problems.	20.6	24.8	22.6	23.0	9.1
Causes long-term respiratory problems.	20.1	26.1	22.1	16.5	15.2
Causes health problems for me or a member of my household.	14.8	19.7	30.3	24.5	10.7
Causes burning/itchy eyes, nose.	16.9	27	23	23	10.1
Obscures mountain views.	19.1	32.8	27.1	13.5	7.5
Causes a "brown cloud."	29.5	37.4	16.1	8.7	8.3
Affects my indoor air quality.	11.6	29.5	25.2	16.7	17

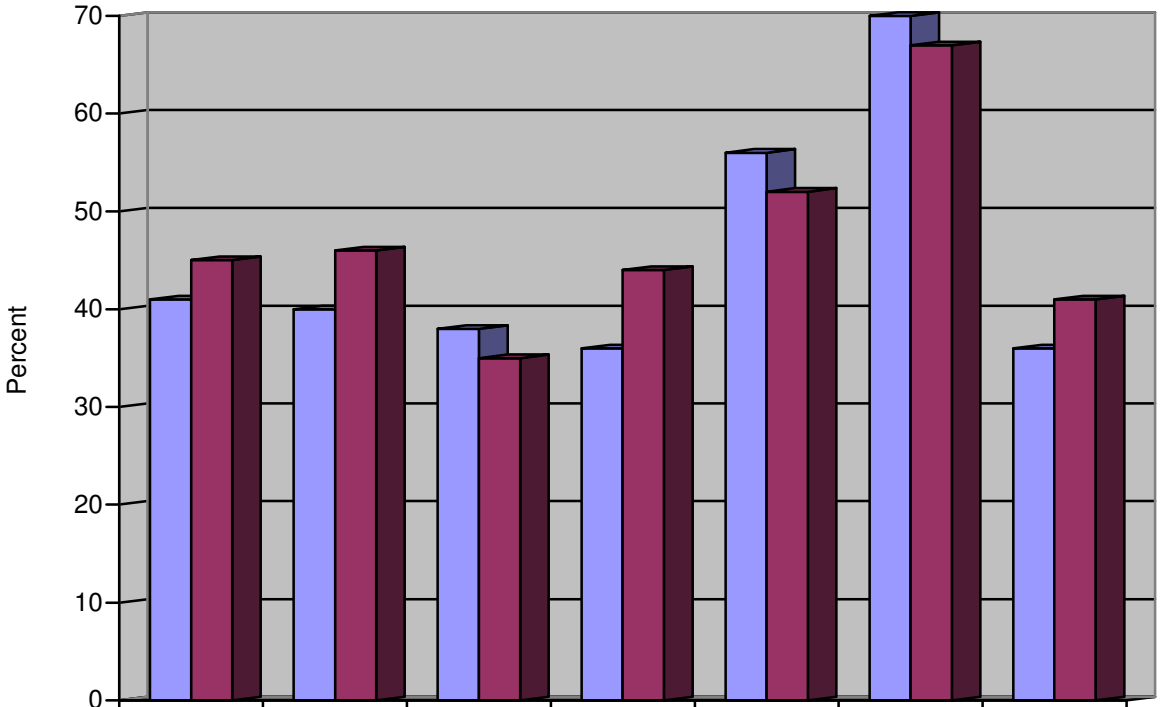
The following two figures are graphical representations of the individual responses to *Air pollution in Fort Collins affects me because it…*taken from Table 4. Looking at the first graphical representation, it can be seen that about half of the respondents "Agree" and half "Disagree" that air pollution *"...triggers allergies/respiratory problems" for them* (45.5% and 45.6%) or *"…causes burning/itchy eyes, nose"* (43.9% and 46%) for them. There were slightly more respondents that "Agree" (46.2%) the air pollution in Fort Collins *"…causes long-term respiratory problems" for them* compared to those who "Disagree" (38.5%). More respondents did "Disagree" (54.8%) that air pollution in Fort Collins *"…causes health problems for me or a member of my household."* than the number who did "Agree" with that statement (34.5%).



The following figure continues with Q4. Here we can see very little difference between "Agree" and "Disagree" for *"…obscures mountain views"* (54.9% and 49.6%) and *"…affects my indoor air quality"* (44.4% and 44.9%). However, almost twice as many respondents "Agree" (66.9%) that air pollution in Fort Collins *"…causes a brown cloud"* than "Disagree" (24.9%)



In looking at the comparisons from 2004 to 2007 in the following figure, virtually no change occurred in perceptions of the affect of air quality on the respondents from 2004 to 2007.



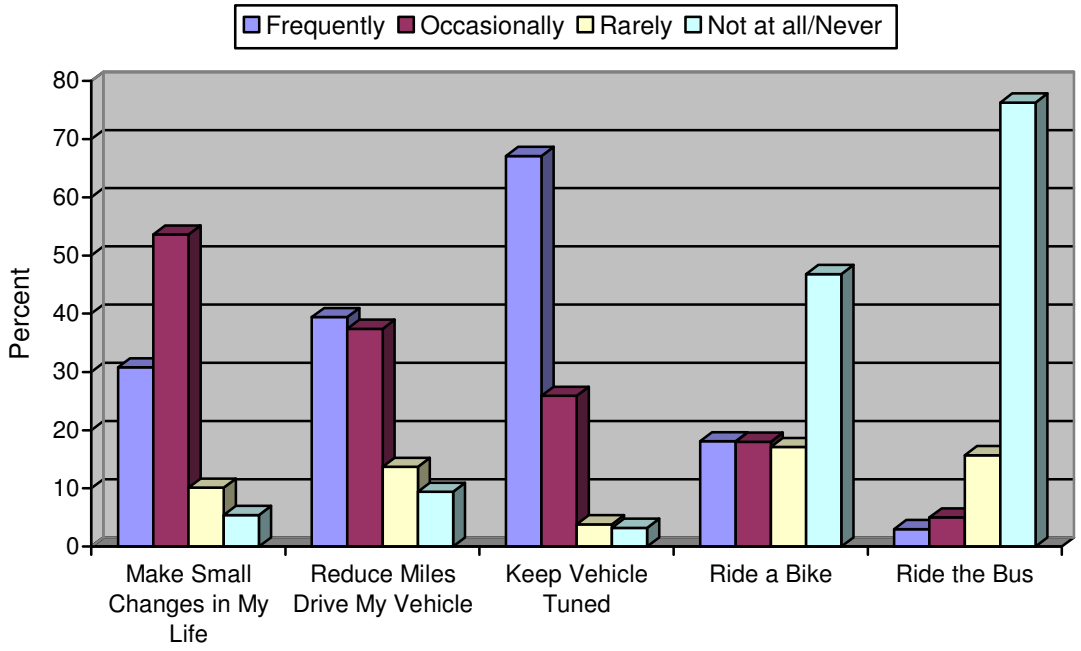
	Triggers Allergies/Respiratory	Causes Long-Term Repiratory	Causes Health Problems:	Causes Itchy/Burning Eyes	Obscures Mountain Views	Causes a "Brown Cloud"	Affects My Indoor Air Quality
2004	41	40	38	36	56	70	36
2007	45	46	35	44	52	67	41

For Q7, we changed the meaning of the words slightly from previous surveys to determine if the respondent is taking actions to help reduce the air pollution in Fort Collins, as opposed to if they would be willing to take these actions. 2007 results found that most respondents (76.3%) "Never" *Take the bus for errands, work or school.* Most of the respondents are "Frequently" (30.8%) and "Occasionally" (53.6%) *Making small changes in my life* and "Frequently" (39.4%) and "Occasionally" (37.4%) *Reduce the number of miles I drive my vehicle."*

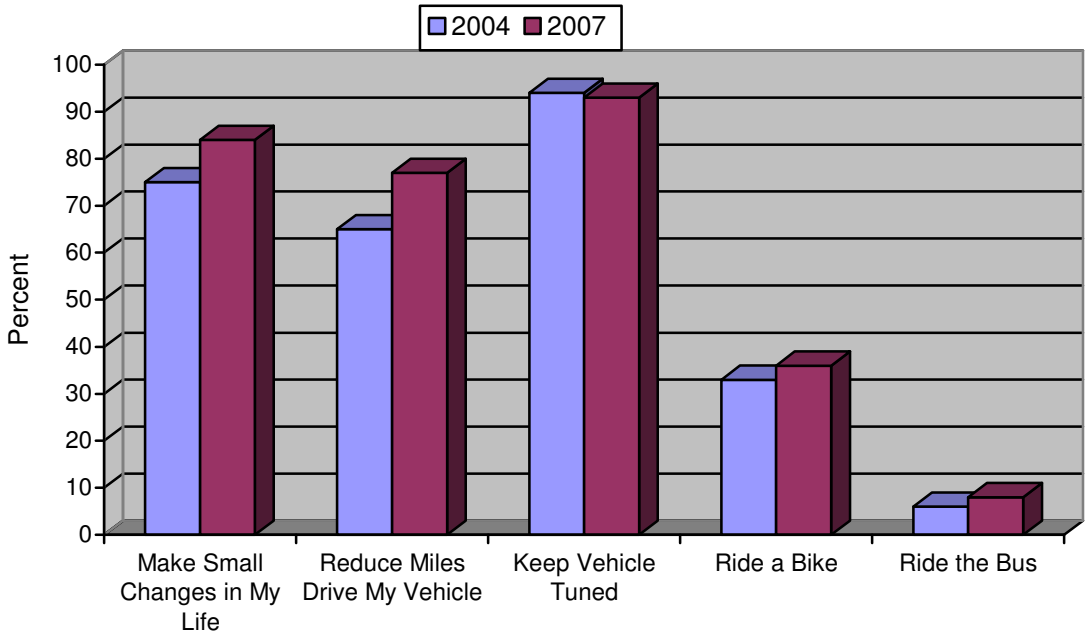
Q7. To help reduce air pollution in the City of Fort Collins, *I*…

Table 6. Percent Respondents' Perceived Control of Specific Personal Actions Ability to Reduce Air Pollution in Fort Collins.

Statement	Frequently	Occasionally	Rarely	Not at All/Never
Make small changes in my life.	30.8	53.6	10.1	5.4
Reduce the number of miles I drive my vehicle.	39.4	37.4	13.7	9.4
Make sure my vehicle is tuned up.	67.1	25.9	3.8	3.2
Ride a bike for errands, work or school.	18.1	18	17.1	46.8
Take the bus for errands, work or school.	3	5	15.7	76.3



In the 2004 survey, 81% of the respondents stated they would "never" take the bus for errands or work. The 2002 survey found that 59 percent of the respondents would not take a bus for errands or work. In other words, the percentage of those not willing to use the bus for transportation increased in 2004 and remains increased. Two of the changes from 2004 to 2007 were small, but positive in *Make small changes in my life* (75% to 84%) and *Reduce the number of miles I drive my vehicle* (65% to 77%). Very little change was seen from 2004 to 2007 in *Make sure my vehicle is tuned up; Ride a bike for errands, work or school* and *Ride the bus for errands, work or school* (See following figure).

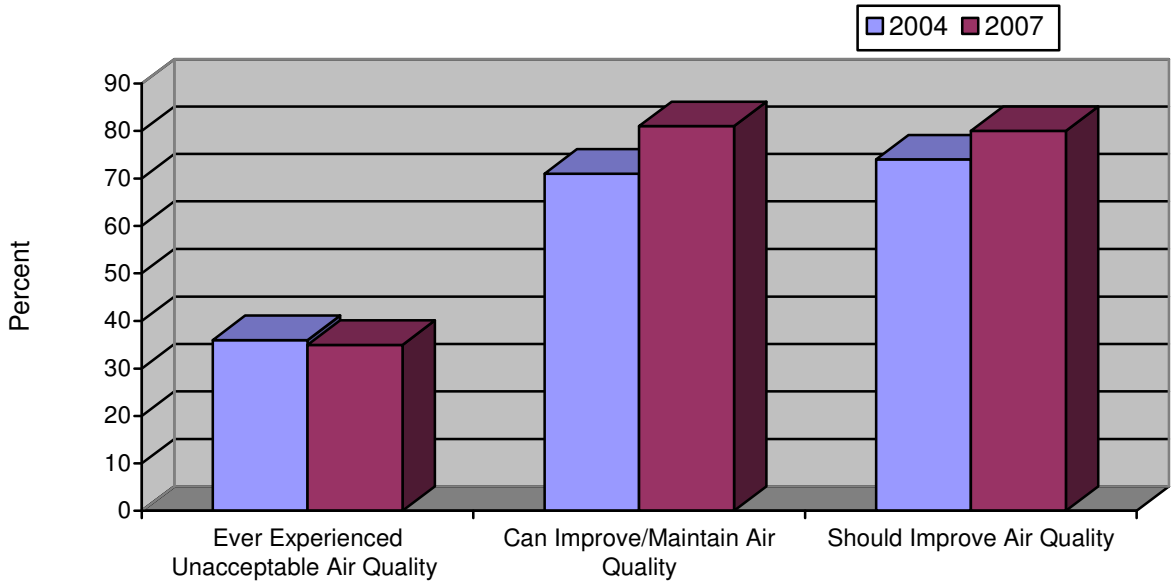


Question 8 measures the degree of awareness and concern in regard to air quality in Fort Collins. Approximately one quarter (24.9%) of the respondents have at some time or another experienced unacceptable air quality in Fort Collins with more than half (54.7%) stating they never have. This number has decreased from the previous two surveys where 40 percent (2002) and 36 percent (2004) stated they had experienced unacceptable air in Fort Collins. Most respondents believe something can (80.9%) and should (79.8) be done to improve the air quality in Fort Collins. These results are consistent with the previous survey in 2004 where most respondents believed something can (71%) be done and should (74%) be done.

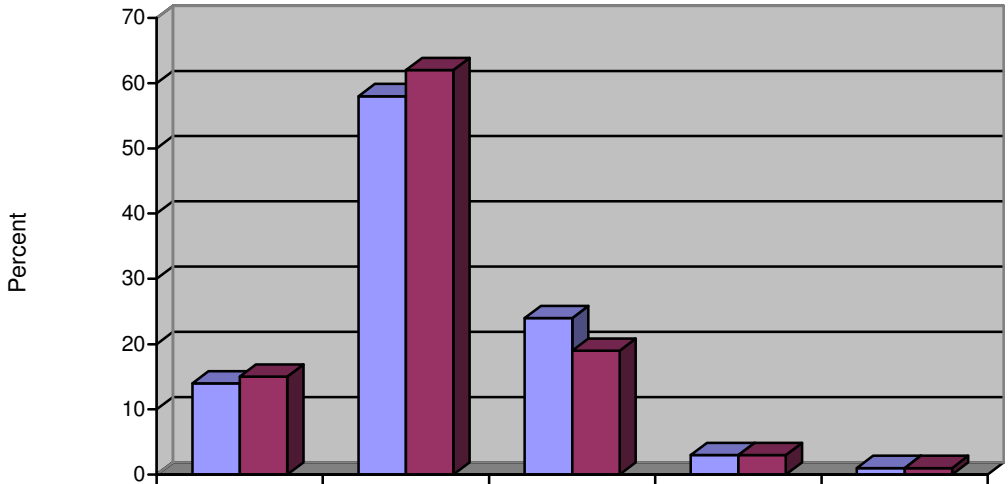
Q8. Please indicate your response to each of the following…

Table 7. Percent Respondents' Experience of, Belief Something Can be Done, and Belief Something Should be Done to Maintain or Improve the Air Quality in Fort Collins.
Cheryl – the top row only adds to 90 – did 10% not answer at all?

Statement	Yes	No	Don't Know
Have you ever experienced unacceptable outdoor air quality in Fort Collins?	24.9	54.7	10.4
Do you think anything can be done to maintain or improve the outdoor air quality in Fort Collins?	80.9	5.9	13.2
Do you think anything should be done to maintain or improve the outdoor air quality in Fort Collins?	79.8	6.7	13.5



Q9. Overall, how would you rate the quality of outdoor air in Fort Collins?



	Very Good	Good	Fair	Poor	Not Sure
2004	14	58	24	3	1
2007	15	62	19	3	1

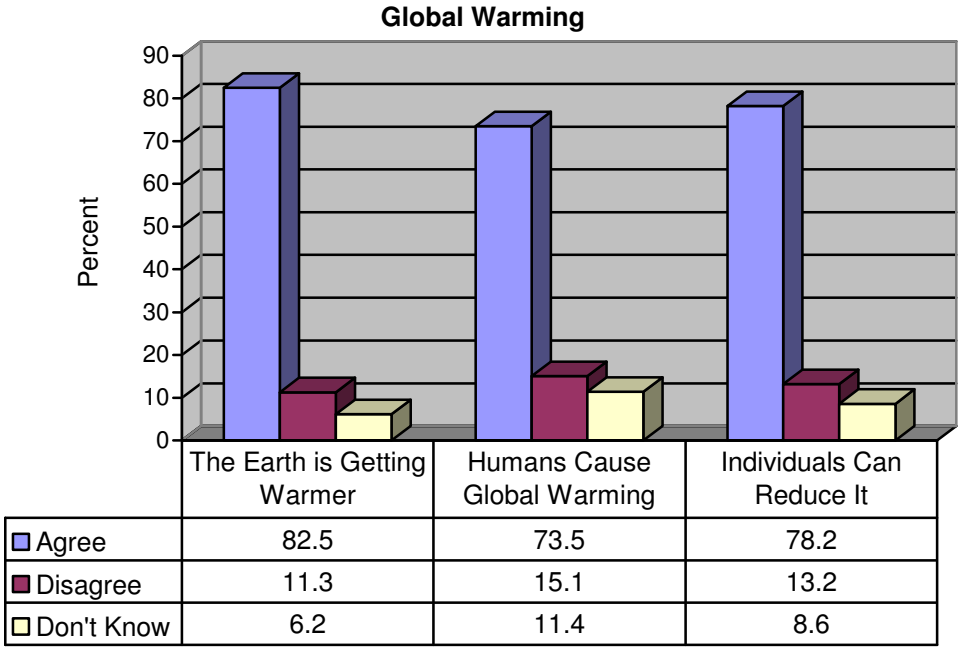
Most respondents rated the overall air quality in Fort Collins as either "very good" or "good" (77%). Comparing the 2004 and 2007 results show that the perceived quality of the air has essentially remained the same.

Question 10 is a new set of question for this year's survey. The scale, or set of questions, attempts to investigate the beliefs, knowledge and attitudes around the issue of global warming. Most of the respondents "Agree" that *The earth is getting warmer (global warming)* (82.5%). Most also "Agree" that *Human caused emissions are causing global warming* (73.5%); *Individual choices can make a positive difference in impacting global warming (reduce it)* (78.2%); *Governments should do more about global warming by offering community programs that enable citizens and businesses to make choices that can reduce global warming* (79.4%) and, *Governments should do more about global warming by enacting legislation and regulations intended to reduce global warming* (68.6%). In support of these findings, most respondents "Disagree" that *Technology will solve global warming without any changes needed in individual behavior* (79%) and they also "Disagree" that *Nothing can be done to reduce global warming* (72.6%).

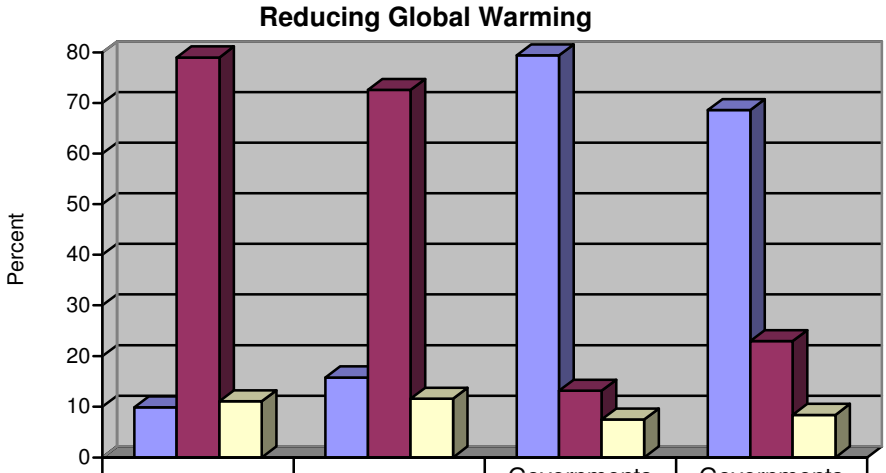
Q10. Please indicate how strongly you agree/disagree with each of the following:

Table 8. Beliefs, Norms, Knowledge and Perceived Control Around Global Warming

Statements	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
The earth is getting warmer (global warming).	53.1	29.4	5.1	6.2	6.2
Human caused emissions are causing global warming.	44.4	29.1	6.4	8.7	11.4
Individual choices can make a positive difference in impacting global warming (reduce it).	44.7	33.5	7	6.2	8.6
Technology will solve global warming without any changes needed in individual behavior.	2.7	7.2	27.7	51.3	11.1
Nothing can be done to reduce global warming.	5.7	10.1	21.5	51.1	11.6
Governments should do more about global warming by offering community programs that enable citizens and businesses to make choices that can reduce global warming.	43.7	35.7	5	8.2	7.5
Governments should do more about global warming by enacting legislation and regulations intended to reduce global warming.	43.4	25.2	9.2	13.8	8.3



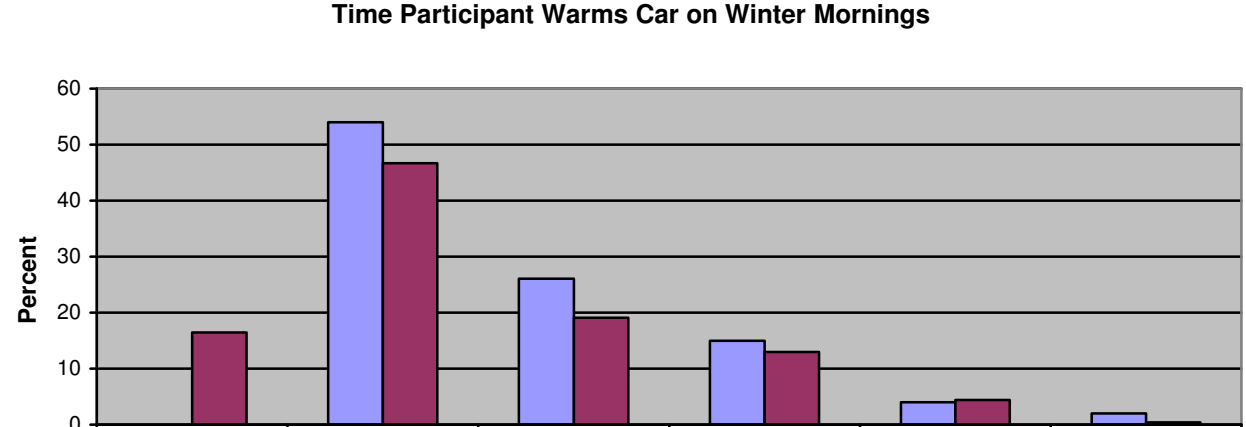
	The Earth is Getting Warmer	Humans Cause Global Warming	Individuals Can Reduce It
Agree	82.5	73.5	78.2
Disagree	11.3	15.1	13.2
Don't Know	6.2	11.4	8.6



	Technology Will Solve GW	Nothing Can be Done	Governments Should Offer Programs	Governments Should Enact Legislation
Agree	9.9	15.8	79.4	68.6
Disagree	79	72.6	13.2	23
Don't Know	11.1	11.6	7.5	8.4

Question 11 changed some this year in that we differentiated between *I do not warm up car and it is parked outside* and *I do not warm up car and it is parked in a garage.* Results found that almost half of the respondents park their car in a garage and do not warm it up (46.7%). More people that park their cars outside do warm their cars up (36.9%) than do not warm their cars up (16.5%).

Q11. How long do you typically warm up your car on winter mornings before driving away?

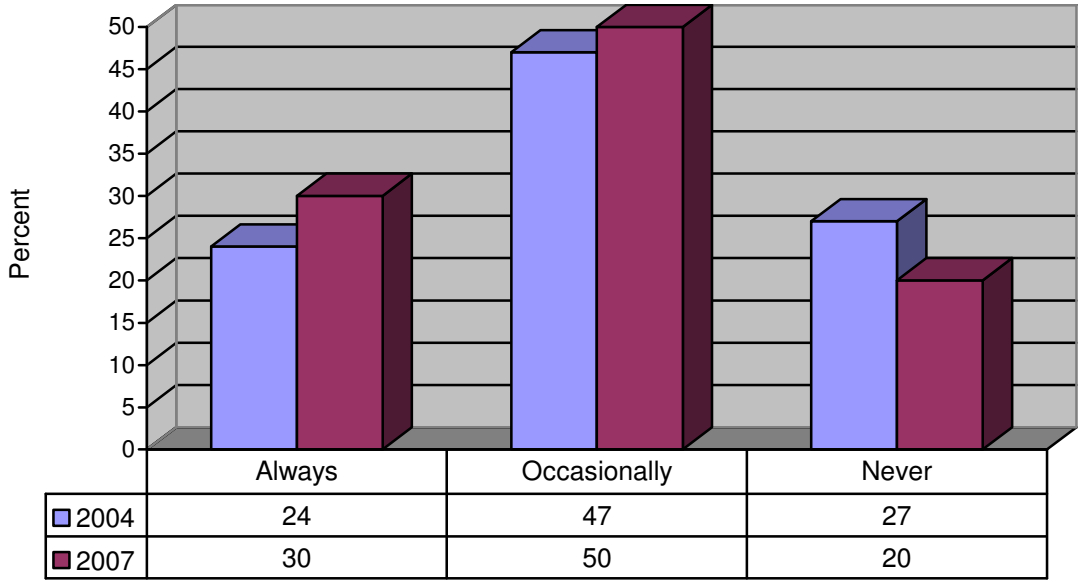


	Do Not Warm Up Car-Parked	Do Not Warm Up Car-Parked	0-2 Minutes	3-5 Minutes	6-10 Minutes	More than 10 Minutes
2004	na	54	26	15	4	2
2007	16.5	46.7	19.1	13	4.4	0.4

The results from 2004 to 2007 are very similar; however, less respondents warm up their cars over 10 minutes in 2007 (.4%) as compared to 2004 (2%) and only 19% of respondents warm it up for 0-2 minutes vs. 26 % in 2004.

Question 12 was new in 2004 and repeated again this year (2007). As in 2004, respondents report that approximately half will "Occasionally" turn their motor off on their vehicle while they are waiting for a train to pass. A change from the 2004 to the 2007 survey shows a reverse in the responses for "Always" and "Never." (2004 had 2 Missing Values)

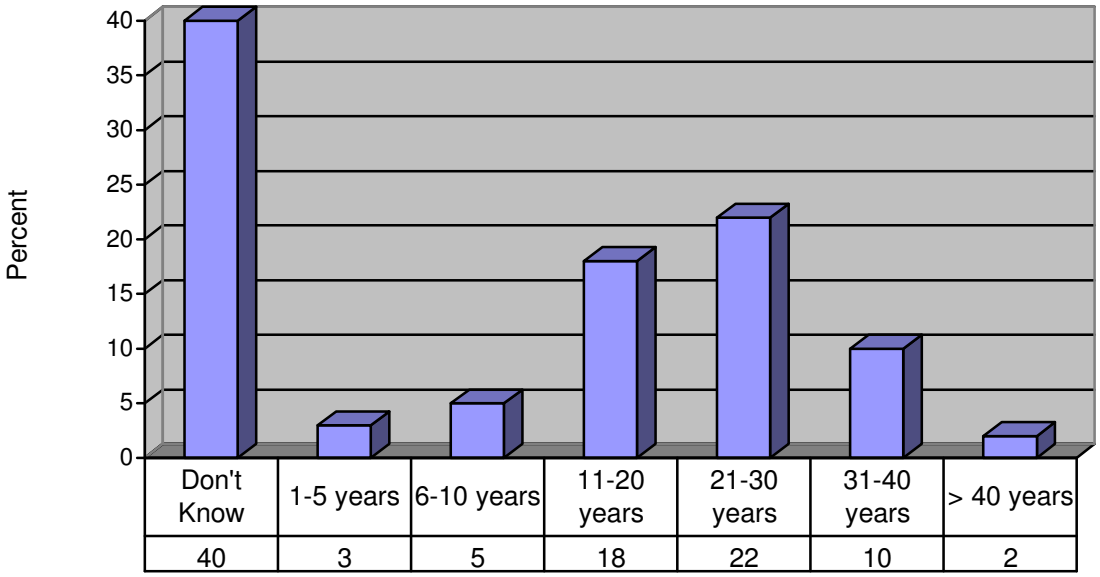
Q12. Do you turn off your vehicle engine while stopped and waiting for a train to pass?



	Always	Occasionally	Never
2004	24	47	27
2007	30	50	20

Question 13 is new to this year. Most respondents did not know (40%) how old their wood-burning device was and the median age of the device fell between 11 and 40 years (50%).

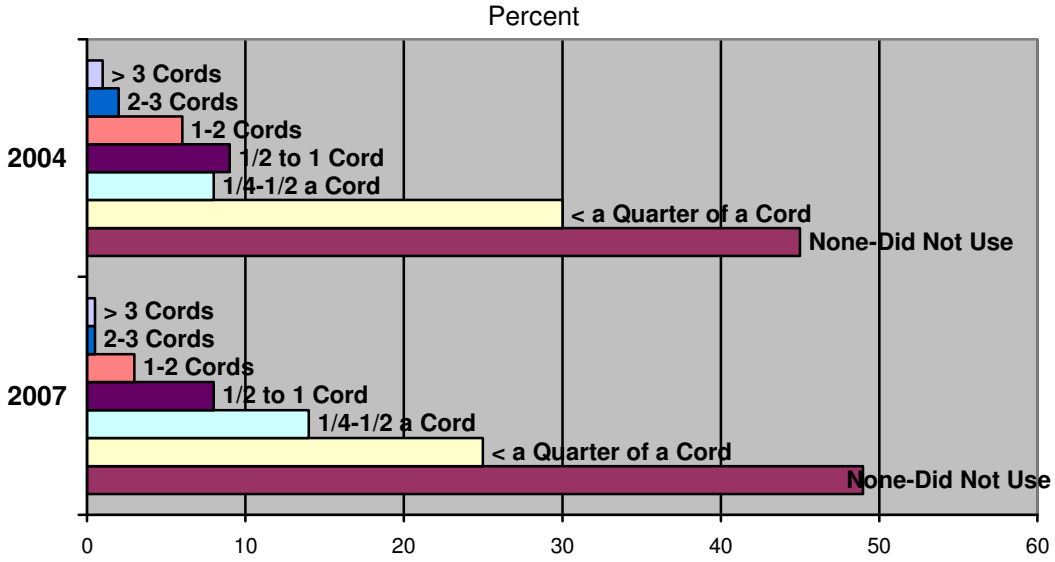
Q13. If you have a wood-burning device, how many years old is it?



The percent of respondents in this survey that had a wood-burning device was **9.9%** as compared to 11% in 2004. (Where is this number from? Could you list the data? It seems a lot lower than Q15 suggests; 30.9%.)

Q14. About how much wood have you burned this past winter in your fireplace or heating stove? (Note: A cord of is a stack 4 feet wide by 4 feet high by 8 feet long.) ***(Responses to this question are based ONLY on those that had indicated they had wood-burning fireplaces or stoves.)***

These results are basically unchanged from the 2002 and 2004 surveys, where most respondents either burned no wood or a very small amount of wood in their stoves or fireplace. A very small decrease can be seen in all categories of wood burned with an increase in those that did not burn at all. This is an interesting finding as the 2007 winter was unusually cold. However, gas fireplace and (gas?) stove use did increase in this survey.



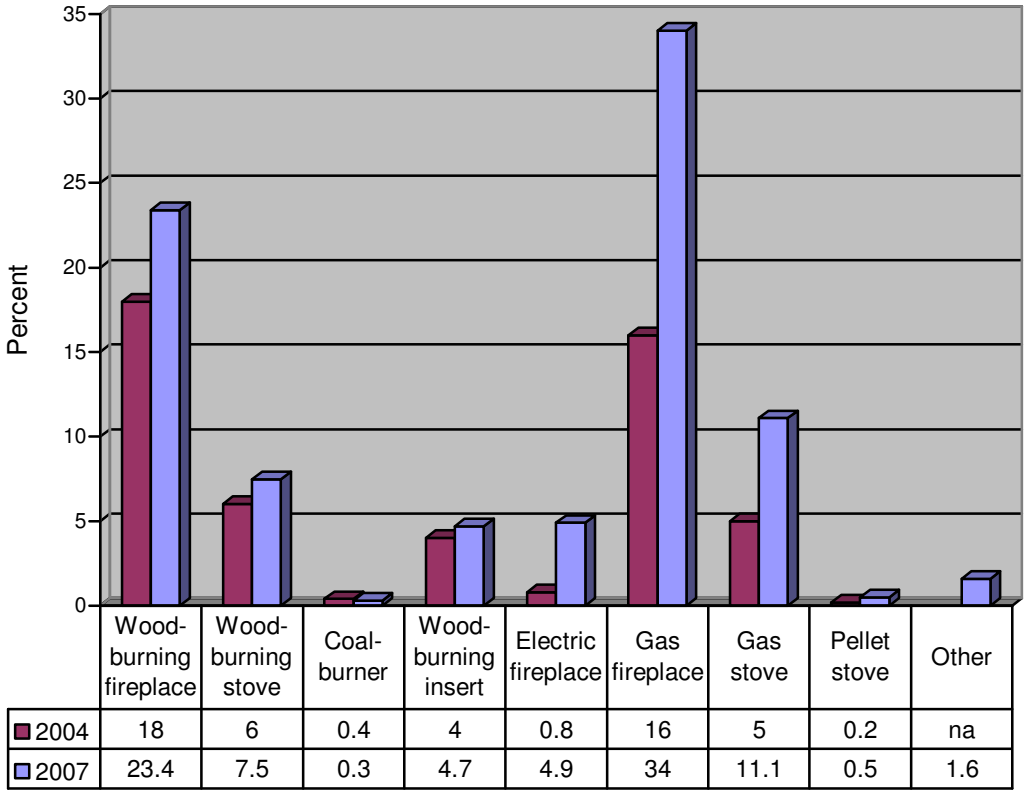
	2007	2004
> 3 Cords	0.5	1
2-3 Cords	0.5	2
1-2 Cords	3	6
1/2 to 1 Cord	8	9
1/4-1/2 a Cord	14	8
< a Quarter of a Cord	25	30
None-Did Not Use	49	45

Q15. In the table below, please indicate if your home has any of the units listed and if that unit is certified. (The Percent certified is ONLY calculated from those who indicated they had the specific unit.)

Table 9. Number of Heating Units in Home and Percent of That Number Certified

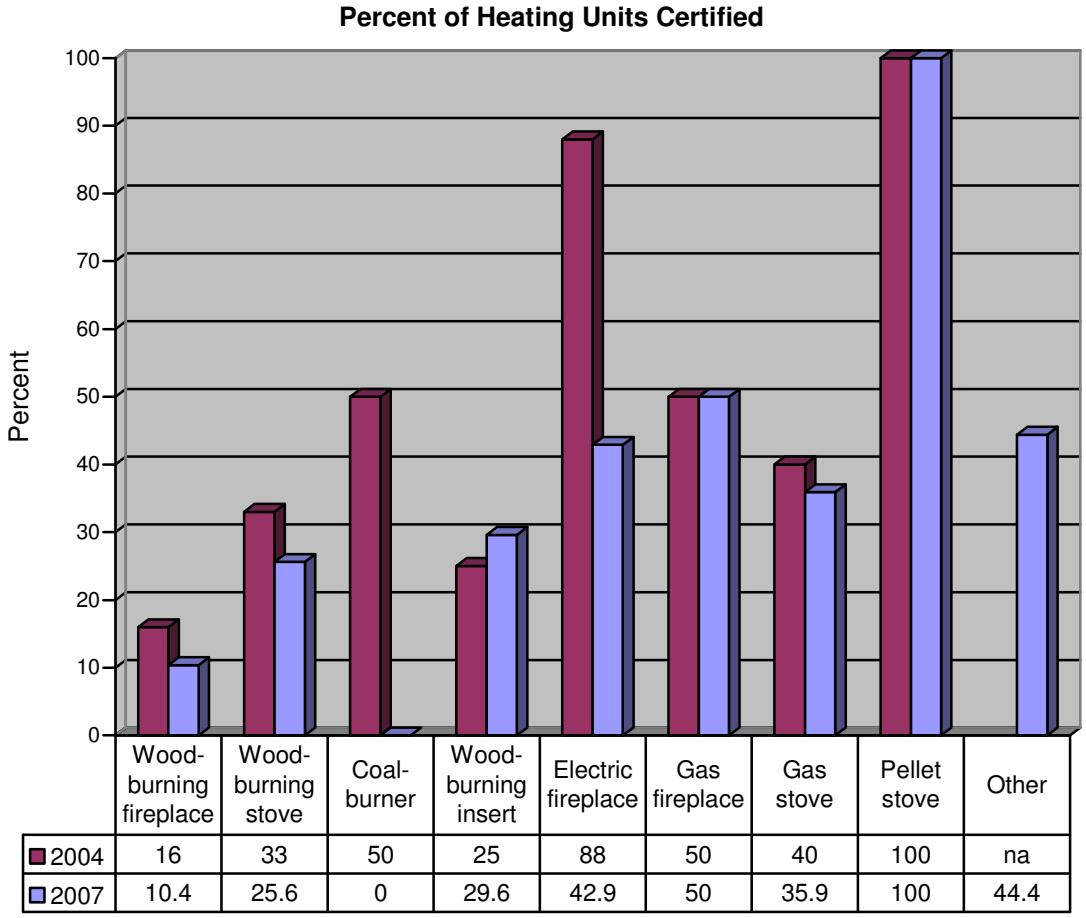
Heating Units	Number Of Units	Percent of Respondents	Percent Certified
Wood-burning fireplace	135	23.4	10.4
Wood-burning stove	43	7.5	25.6
Coal-burning fireplace or stove	2	0.3	0
Wood-burning fireplace insert	27	4.7	29.6
Electric fireplace	28	4.9	42.9
Gas fireplace	196	34	50
Gas stove	64	11.1	35.9
Pellet stove	3	0.5	100
Other	9	1.6	44.4

The category of "Other" was new to this year's survey and could indicate sources such as solar (1.6%). The use of gas devices as heating sources rose markedly from 2004 to 2007 with *Gas Fireplaces* increasing from 16% to 34% and *Gas Stoves* increasing from 5% to 11%. Another large increase was in the percent of respondents reporting an *Electric Fireplace* from 2004 (.8%) to 2007 (4.9%).



	Wood-burning fireplace	Wood-burning stove	Coal-burner	Wood-burning insert	Electric fireplace	Gas fireplace	Gas stove	Pellet stove	Other
2004	18	6	0.4	4	0.8	16	5	0.2	na
2007	23.4	7.5	0.3	4.7	4.9	34	11.1	0.5	1.6

When comparing and interpreting the 2004 to 2007 results on the percent of each unit indicated that is known to be certified by the respondent, caution must be made when looking at heating devices such as *Coal-Burners, Electric Fireplaces and Pellet Stoves* as a very small "N" (number of respondents indicating the particular heating unit) exists. For example, in 2004 and 2007, only 2 people indicated a coal-burning heating unit. In 2004, neither was certified, and in 2007 one was certified showing a large difference in percentage between the two survey years, but in reality a very small difference.



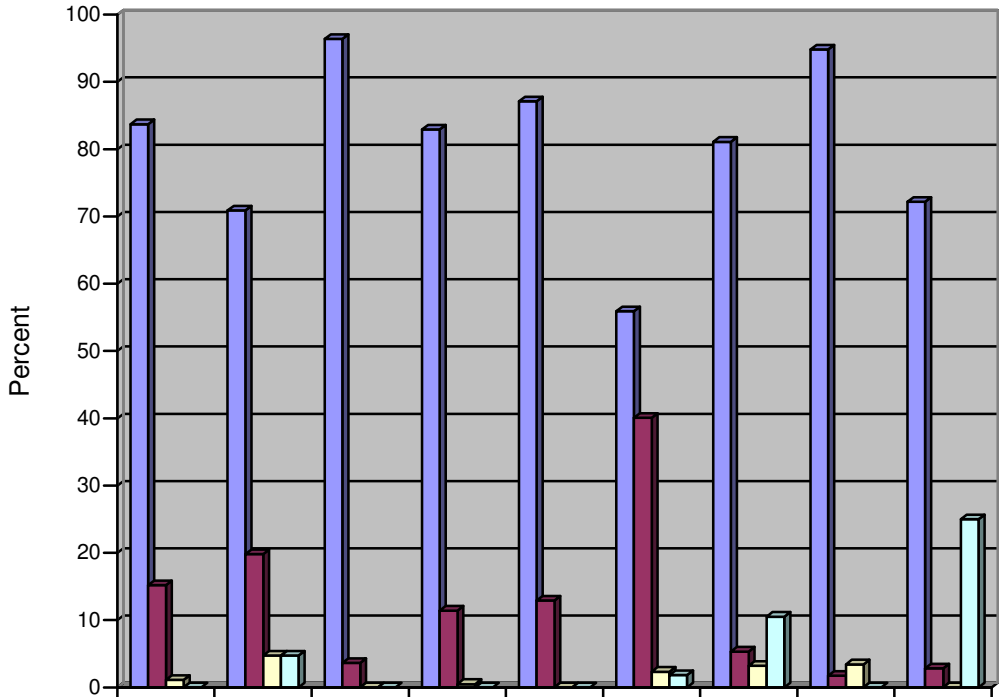
Please indicate the percentage of your heating needs that each unit supplies…

Table 10. Percentage of Heating Needs Each Unit Provides (Calculated From the Units Selected)

Heating Units	None	< 25%	25-50%	> 50%
Wood-burning fireplace	83.7	15.2	1.1	0
Wood-burning stove	70.9	19.8	4.7	4.7
Coal-burning fireplace or stove	96.4	3.6	0	0
Wood-burning fireplace insert	82.9	11.4	0.5	0
Electric fireplace	87.1	12.9	0	0
Gas fireplace	55.9	40.1	2.3	1.8
Gas stove	81.1	5.3	3.2	10.5
Pellet stove	94.8	1.7	3.4	0
Other	72.2	2.8	0	25

When looking at devices that were used to provide > 50% of heating needs, out of ONLY those that indicated having such a device, was only 1.8% for *Gas Fireplaces,*10.5% for *Gas Stoves,* and 25% for *Other. Gas Fireplace* was used the most for heating "<25% of heating needs" (40.1%), more than likely as a supplemental on cold days or evenings. Further surveys should add specific items for "Other" as no respondent indicated the type of heating device on the blank line provided for them. A suggestion would be to keep "Other" but add "Solar."

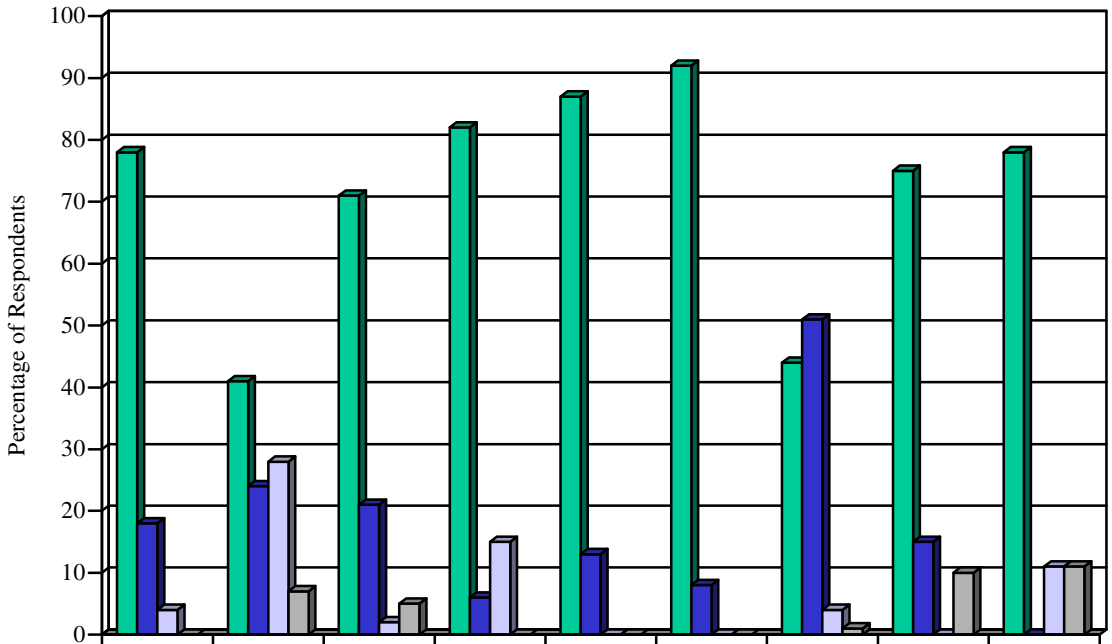
2007 Survey: Percentage of Heating Each Unit Supplies



	Wood-burning fireplac	Wood-burning stove	Coal-burner	Wood-burning insert	Electric fireplace	Gas fireplace	Gas stove	Pellet stove	Other
None	83.7	70.9	96.4	82.9	87.1	55.9	81.1	94.8	72.2
<25%	15.2	19.8	3.6	11.4	12.9	40.1	5.3	1.7	2.8
25-50%	1.1	4.7	0	0.5	0	2.3	3.2	3.4	0
>50%	0	4.7	0	0	0	1.8	10.5	0	25

A comparison of the result from 2004 for the percent of heat additional heating units provides shows no difference outside of the Pellet Stove users. In 2004, 11% of those with Pellet Stoves responded that their pellet stoves provided over 50% of their heat compared to the 2007 survey respondents (n=1) who indicated their pellet stoves never provided more than 50% of their heat.

2004 Survey: Percentage of Heating Needs Each Type of Unit Supplies



	Wood-burning fireplace	Wood-burning stove	Wood-burning insert	Coal-burning	Electric fireplace	Masonry heater	Gas fireplace	Gas stove	Pellet stove
None	78	41	71	82	87	92	44	75	78
<25%	18	24	21	6	13	8	51	15	0
25-50%	4	28	2	15	0	0	4	0	11
>50%	0	7	5	0	0	0	1	10	11

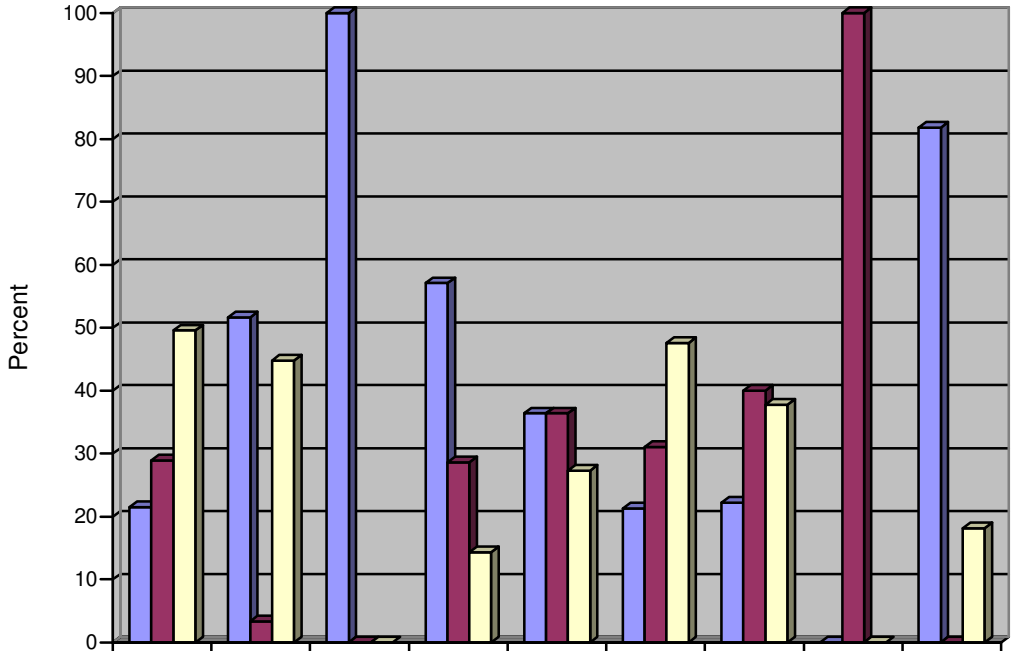
In 2004, interestingly, the type of heating unit used most for heating needs was the *gas fireplace* (51 percent of respondents for less than 25% of the total heating needs). The *wood-burning stove* was chosen by 28 percent of the respondents as fulfilling 25-50 percent of their heating needs while in 2007, 29 percent used it for at least 25% of their heating needs. In 2004, again, the *gas stove* provided over 50 percent of the heating needs by 10 percent of the respondents.

How often is the unit checked or cleaned, either by you or by professionals?

Table 10. Percent frequency of Checking or Cleaning From the Number of Units Selected

Heating Units	At Least Once/Year	Every 2 or 3 Years	Never, or > Every 3 Years
Wood-burning fireplace	21.5	28.9	49.6
Wood-burning stove	51.7	3.4	44.8
Coal-burning fireplace or stove	100	0	0
Wood-burning fireplace insert	57.1	28.6	14.3
Electric fireplace	36.4	36.4	27.3
Gas fireplace	21.3	31.1	47.6
Gas stove	22.2	40	37.8
Pellet stove	0	100	0
Other	81.8	0	18.2

In the 2007 survey, results show that both the *Coal-burning* devices are checked on a yearly basis. The *Wood-Burning Inserts* and *Wood-burning stoves* were checked regularly, while the *Wood-burning Fireplaces* were checked at least every 3 years about 50% of the time. The same results were found for the *Gas Fireplace* and similar results were found for *Gas Stove*.



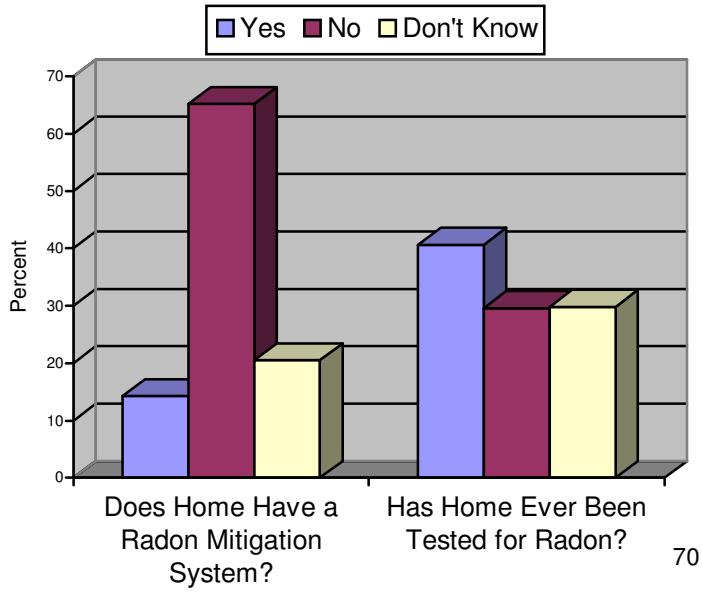
	Wood-burning fireplac	Wood-burning stove	Coal-burner	Wood-burning insert	Electric fireplace	Gas fireplace	Gas stove	Pellet stove	Other
At Least Once/Year	21.5	51.7	100	57.1	36.4	21.3	22.2	0	81.8
Every 2 or 3 Years	28.9	3.4	0	28.6	36.4	31.1	40	100	0
Never, >3 Years	49.6	44.8	0	14.3	27.3	47.6	37.8	0	18.2

In 2004, the heating units checked or cleaned most often are the *wood-burning stove*, *gas stove, gas fireplace* and the *pellet stove.* Of the three wood-burning heating units, the *wood-burning fireplace* is the type of heating unit least likely to be checked or cleaned on a regular basis.

Q16. Please indicate one response for each question.

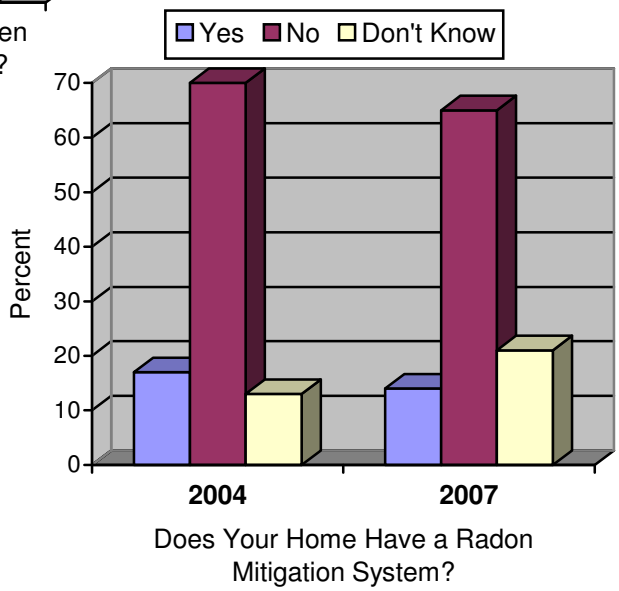
Table 12. Percent of Respondents with Radon Mitigation in Home, Home Ever Tested for Radon

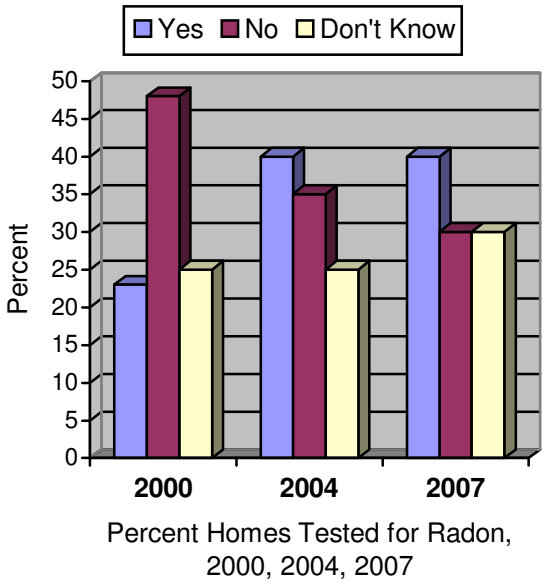
Question	Yes	No	Don't Know
Does your home have a radon mitigation system?	14.3	65.2	20.5
Has your home ever been tested for radon?	40	30	30



Most homes in the survey did not have a radon mitigation system (65%). However, more homes had been tested for radon (40%) than had not been tested (30%). Interestingly, many homeowners and/or renters (30%) did not know whether their home had been ever tested for radon.

Comparing the 2004 (17%) results of the percent of homes with a radon mitigation system installed shows a slight decrease in those responding "Yes" in 2007 (14%) and in an increase in the "Don't Know" from the 2004 to the 2007 survey (13% to 21%).

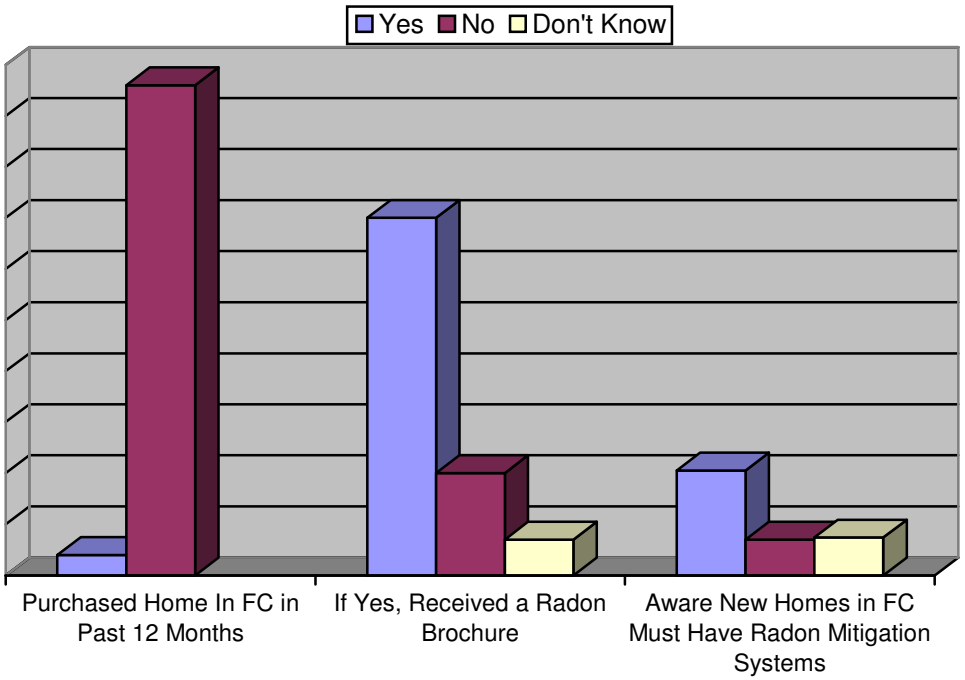




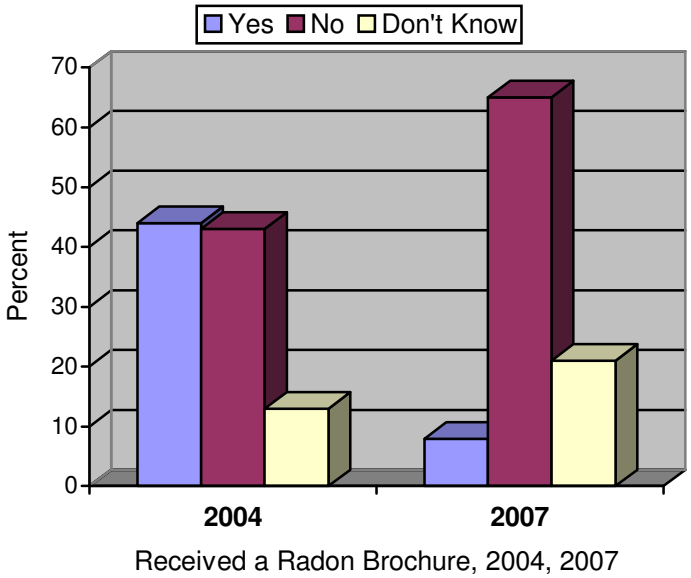
Comparing the 2000, 2004 and 2007 results of the percent of homes tested for radon, there was an increase in those tested for radon from 2000 (23%) to 2004 (40%). The change from 2004 to 2007 was zero for "Yes"; however, more respondents in 2007 (30%) reported "Don't Know" as compared to 2004 (25%) and a decrease in "No" from 2004 (35%) to 2007 (30%).

Table 13. Radon Questions-Percent Responses

Question	Yes	No	Don't Know
Did you purchase a home in the past 12 months in the Fort Collins area?	4	96	---
If "Yes", did you receive a brochure with radon information?	70	20	10
Are you aware that new homes built in Fort Collins are now required to have radon mitigation systems built in?	35	58	7



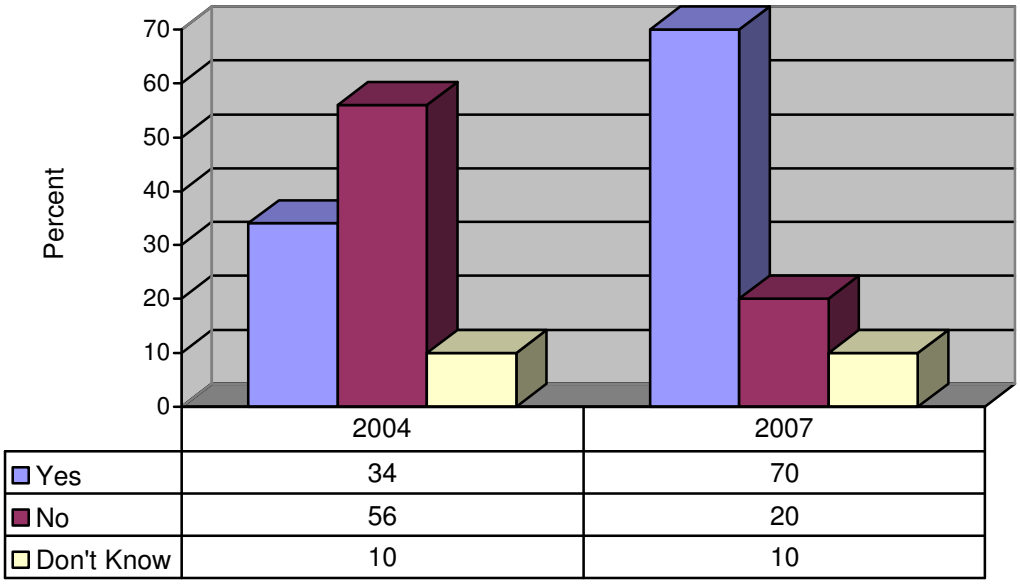
Only 4 percent of the survey respondents had bought a home in the Fort Collins area in the past 12 months. Of that 4 percent, 70% had received a brochure with radon information. Slightly more than half of the respondents (58%) were not aware that new homes built in Fort Collins are now required to have radon mitigation systems built in.



Received a Radon Brochure, 2004, 2007

Comparison of the 2004 and 2007 results for receiving a radon brochure for homes purchased in Fort Collins in the past 12 months showed a substantial increase from 2004 (43%) to 2007 (65%).

Awareness that homes built in Fort Collins are required to have radon mitigation systems increased substantially from 2004 (34%) to 2007 (70%).

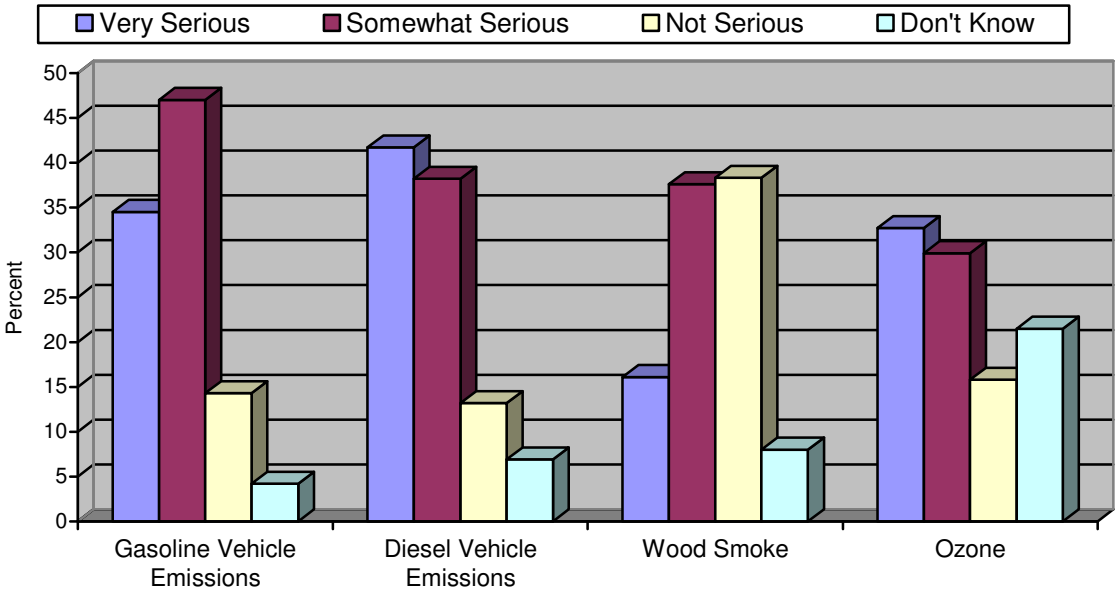


	2004	2007
Yes	34	70
No	56	20
Don't Know	10	10

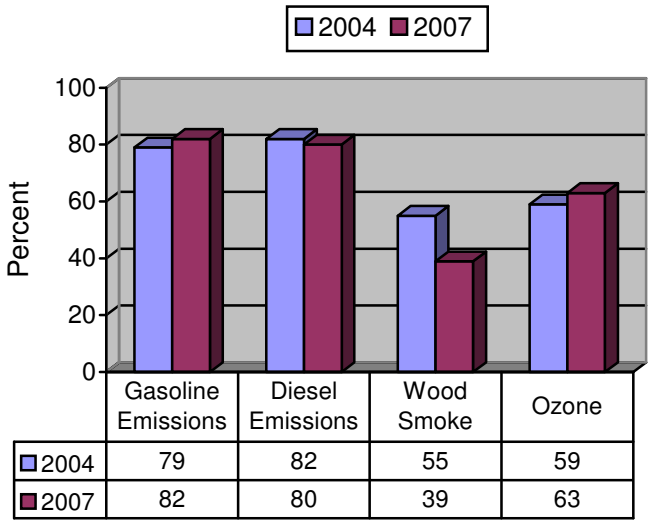
17. Using the scale shown, please rate your concern for the pollutants listed as they relate to you and your family's day-to-day health and environment:

Table 14. Percent Respondent Rating of Pollutants in Daily Life

Pollutants	Very Serious	Somewhat Serious	Not Serious	Don't Know
Gasoline vehicle emissions	34.5	47	14.3	4.2
Diesel vehicle emissions	41.7	38.2	13.2	6.9
Wood smoke from fireplaces, wood stoves	16.1	37.6	38.3	8
Ozone	32.7	29.9	15.8	21.5



Gasoline Vehicle Emissions (82%) and *Diesel Vehicle Emissions* (80%) are both considered either "Very Serious" or "Somewhat Serious" pollutants to the respondent in regards to their own or their family's health and the environment. *Wood Smoke* is still considered equally "Somewhat Serious" (38%) and "Not Serious" (38%), with only 16 percent of the respondents indicating that *Wood Smoke* is a "Very Serious" pollutant. The *Ozone* category is interesting as many respondents indicated that they just "Don't Know" (22%), while more than half (63%) still consider it a "Serious" pollutant as compared to a "Not Serious" (16%) pollutant.



	Gasoline Emissions	Diesel Emissions	Wood Smoke	Ozone
2004	79	82	55	59
2007	82	80	39	63

Comparing the 2004 "Serious" and "Somewhat Serious" survey results to the 2007 survey finds very little change for *Gasoline* and *Diesel Vehicle Emissions.* A small increase in seriousness of *Ozone* was seen and a substantial decrease in ratings of seriousness over *Wood Smoke* as a pollutant was observed from 2004 (55%) to 2007 (39%).

New to the 2007 survey, a question to measure whether the respondent would be in favor of continuing the vehicle emissions testing program in Fort Collins was included. The following information was provided to the respondent prior to asking them Q18:

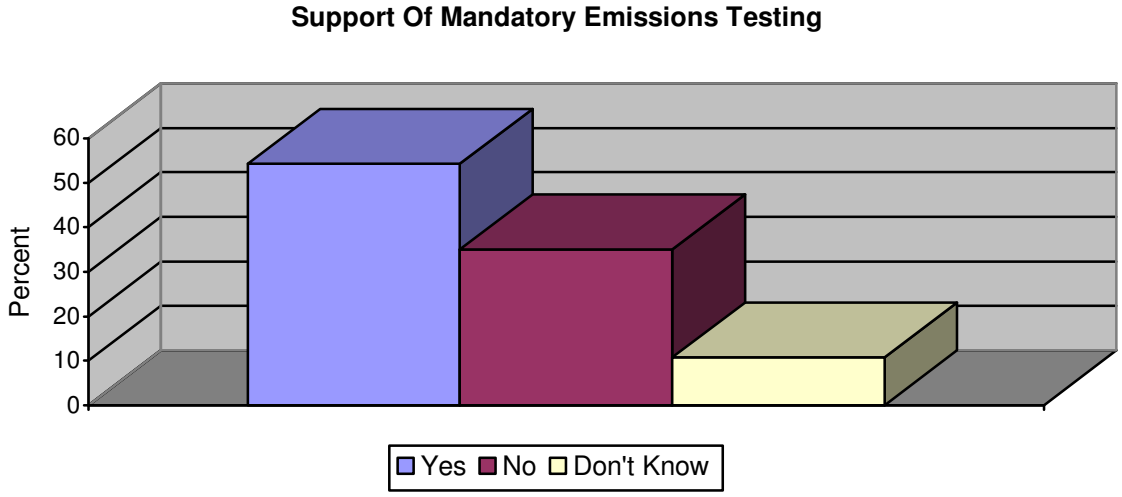
> *"The motor vehicle emissions program began in 1980 to reduce carbon monoxide levels. Fort Collins is now well below the federal health standard for carbon monoxide, so the emissions testing program is no longer required and has been terminated in Fort Collins. However, Fort Collins is very close to violating the ozone health standard. Ground level ozone is a respiratory irritant that can trigger asthma. Motor vehicle emissions contribute to ozone formation and emissions programs can help reduce ozone-forming pollutants."*

18. Would you support having a mandatory vehicle emissions program in Fort Collins even though the federal government no longer requires it?

Table 15. Percent Respondents Support for a Mandatory Vehicle Emissions Program

	Yes	No	Don't Know
Support for a mandatory vehicle emissions program in Fort Collins even though not Federally required.	54	35	11

The results found that the majority of the respondents would support a mandatory emissions testing program (54%), with more than a third opposing this program (35%) and 11 percent stating that they "Don't Know."

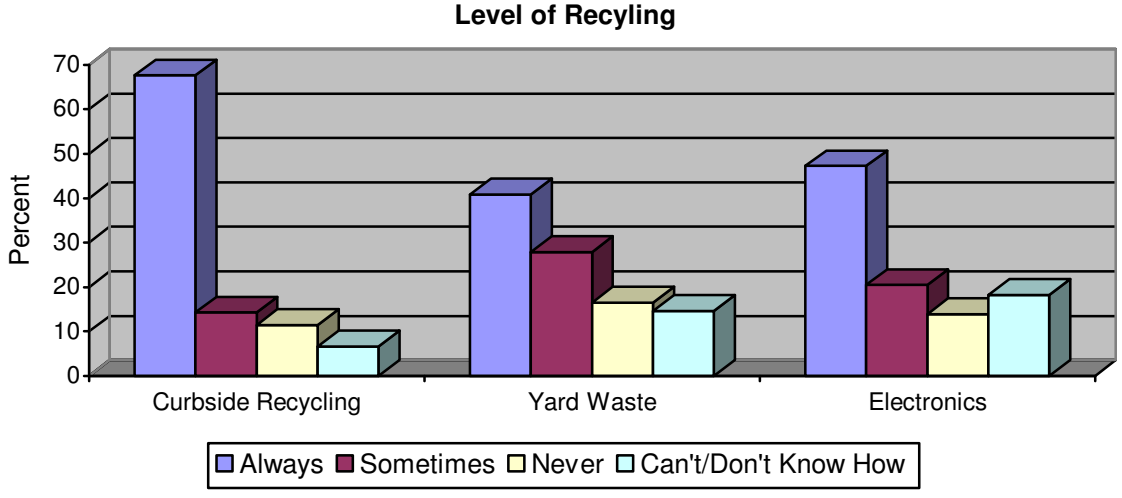


There were three questions added to this air quality survey to gain information around some of the recycling habits or knowledge of the respondents.
The first of these measured the level of current recycling efforts of the respondents. Most (67.6%) "Always" recycle using the "Curbside recycling" services; yet, 26 percent only do it "Sometimes" or "Never." Quite a few respondents "Can't/Don't Know How" to recycle *Yard Waste* (14.7%) or *Electronics, such as old computers* (18.3%).

Q19. I recycle at the following level:

Table 16. Percent Respondents Level of Recycling by Item Category

	Always	**Sometimes**	**Never**	**Can't/Don't Know How**
Curbside recycling	67.6	14.3	11.5	6.6
Yard waste	40.8	27.9	16.5	14.7
Electronics, like old computers	47.2	20.5	14	18.3

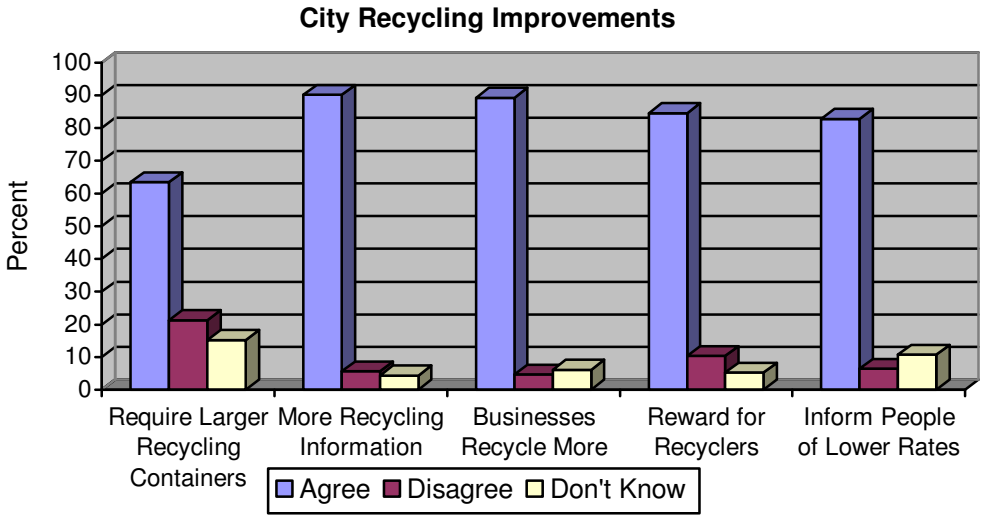


The second recycling question asks the respondent to let the City know what it can do to facilitate recycling on the part of the citizens. The majority of respondents either "Strongly Agree" or "Agree" that the City of Fort Collins should *Require larger recycling containers* (63%); *Provide more information about how/where to recycle* (90%); *Ask businesses to recycle more* (89%); *Do more to reward people who recycle* (85%); and, *Inform people that signing up for lower levels of trash service will lower their rates* (83%). However, almost one-quarter (21%) of respondents either "Somewhat Disagree" or "Strongly Disagree" that larger recycling containers were needed.

Q20. To help improve recycling in Fort Collins, the City should…

Table 16. Percent Respondents Attitudes Toward City's Responsibilities to Improve Recycling

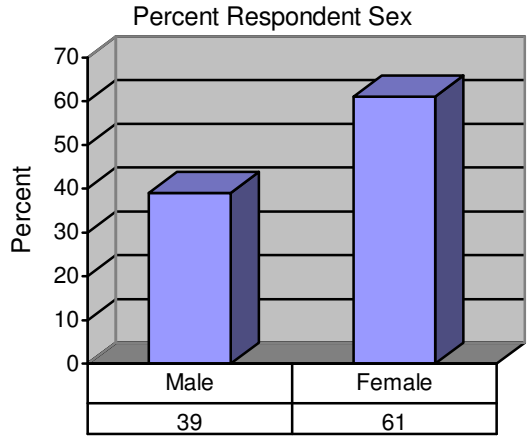
Statements	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Don't Know
Require larger recycling containers.	30.4	33	16	5.3	15.3
Provide more information about how/where to recycle.	54.3	35.8	4.3	1.3	4.3
Ask businesses to recycle more.	64.3	24.9	3.2	1.4	6.1
Do more to reward people who recycle.	54.6	29.9	7.4	2.9	5.2
Inform people that signing up for lower levels of trash service will lower their rates.	54	28.8	4.3	2.1	10.7



Q21. Are there ay other suggestions you have to help improve recycling in Fort Collins?

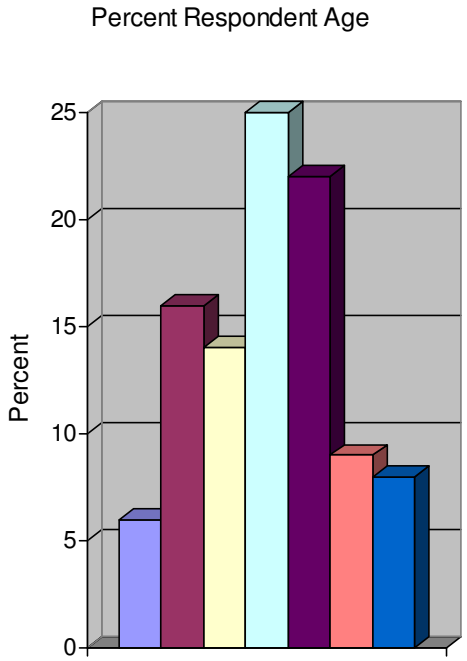
(Responses to this question are qualitative and can be found in Appendix A)

Demographics

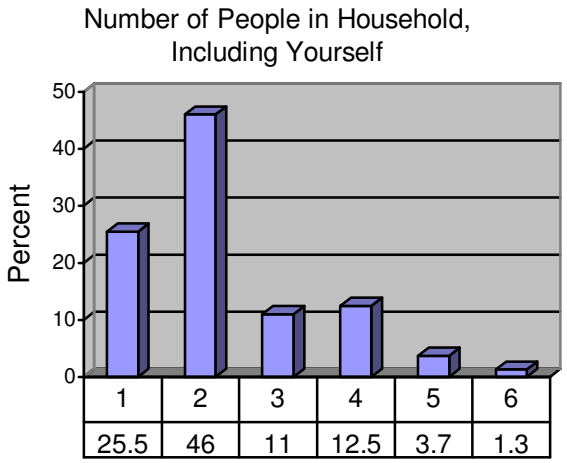


More females (61%) responded to this survey than males (39%).

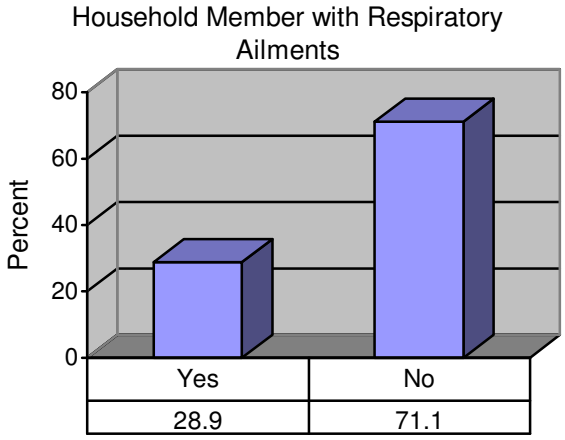
Most respondents fell between the ages of 26 and 65 (77%). This year, a larger percentage of respondents were under the age of 35 (22%) as compared to the 2004 survey (18%). In addition, there was a higher percentage over the age of 65 in this survey (17%) as compared to 2004 (14%). These small variances in ages of respondents, may account for some variances in the survey responses.



18-24	6
25-35	16
36-45	14
46-55	25
56-65	22
66-75	9
>75	8

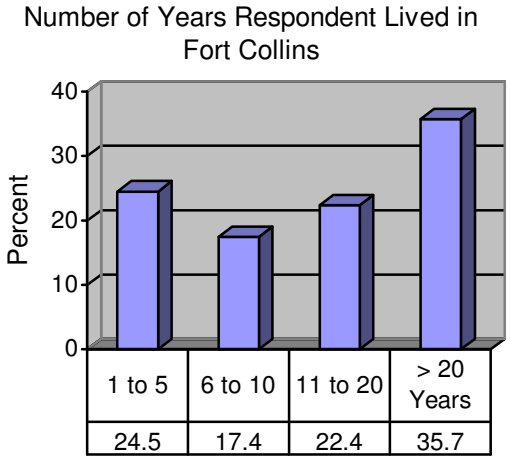


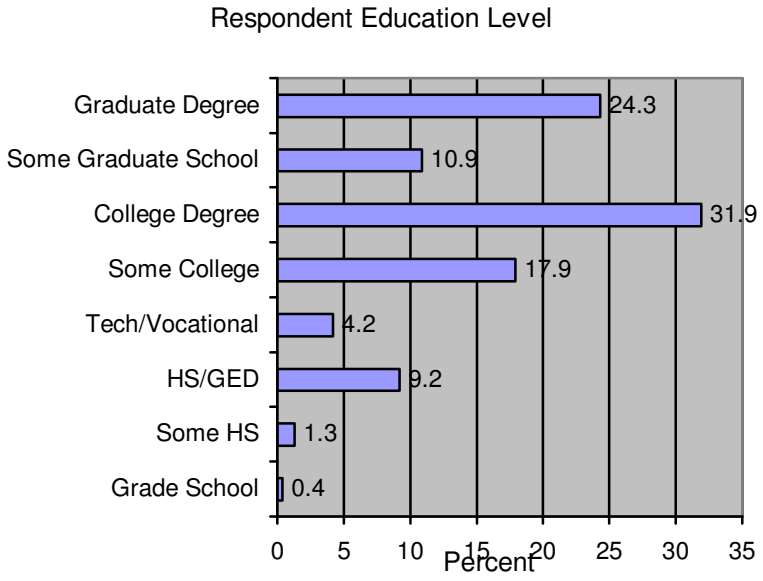
Most households were a two-person (46%) household. One-person households made up 26% of the respondents.



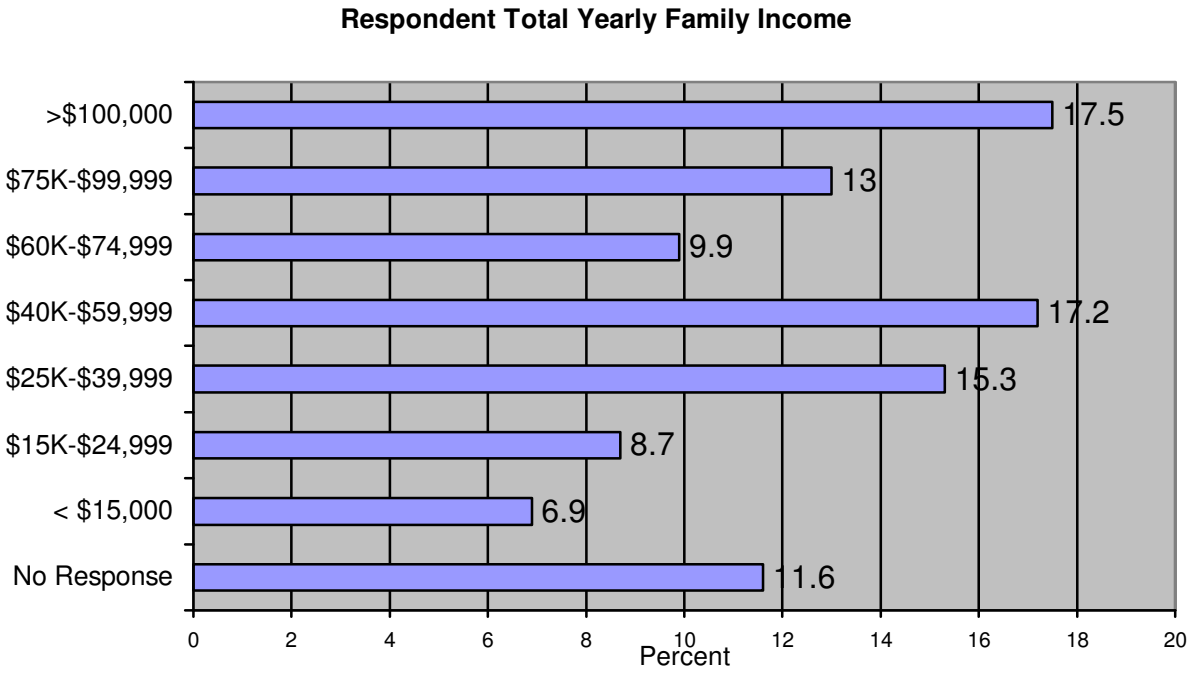
The percentages of respondents with a household member with a respiratory ailment is essentially unchanged from the previous surveys.

The same can be stated about the number of years the respondent has lived in Fort Collins. Very little change can be seen. However, again, 36 percent lived here over 20 years and thus able to relay accurate information on air quality in Fort Collins over time.

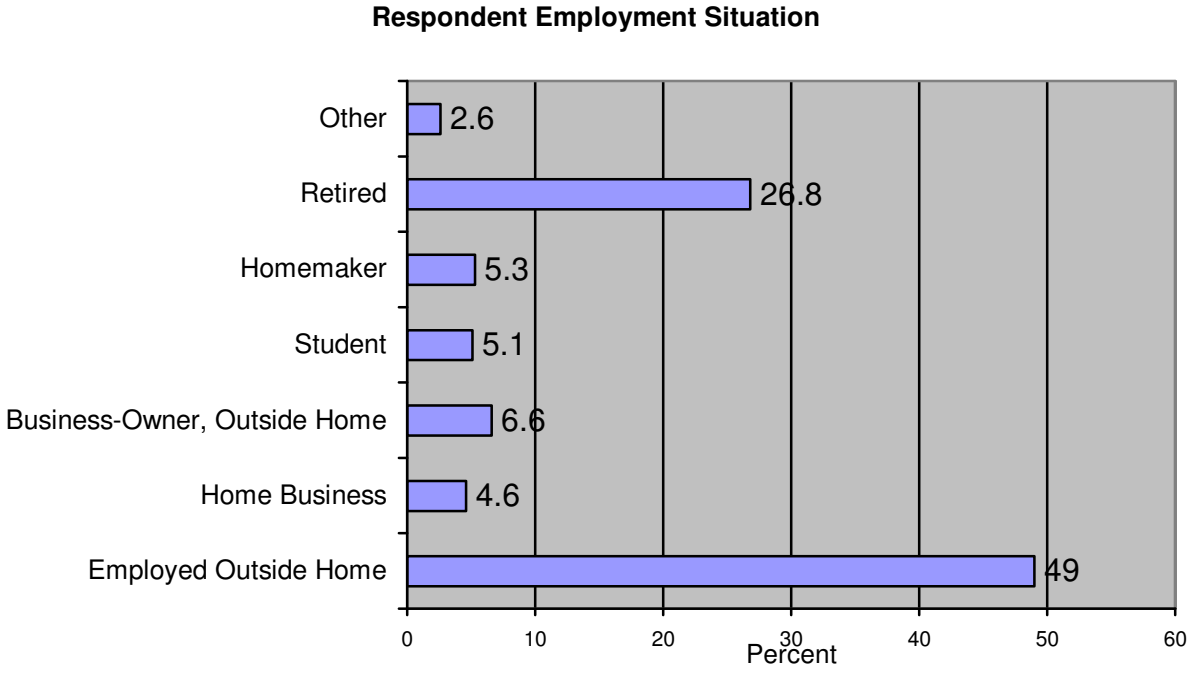




Most of the respondents of this survey had either a college degree (32%) or a graduate degree (24%) with 11 percent more with some graduate school. Results are unchanged from the previous surveys.

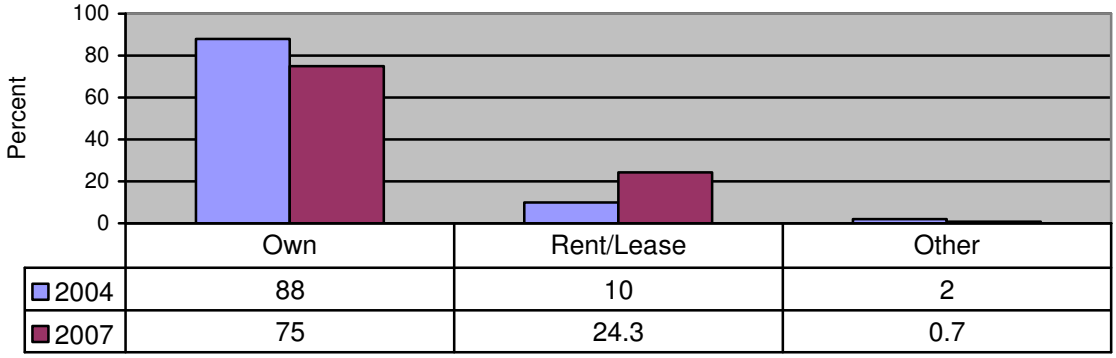


The total yearly family income showed that the majority of the respondents to this survey were earning over $40,000 per year (58%). However, this percentage has decreased markedly since the 2004 survey where 79 percent were earning over $40,000. This may be due to the larger number or respondents between 24 and 35 years of age in this survey compared to 2004.



Again, most of the respondents in this survey were employed outside the home (49%).

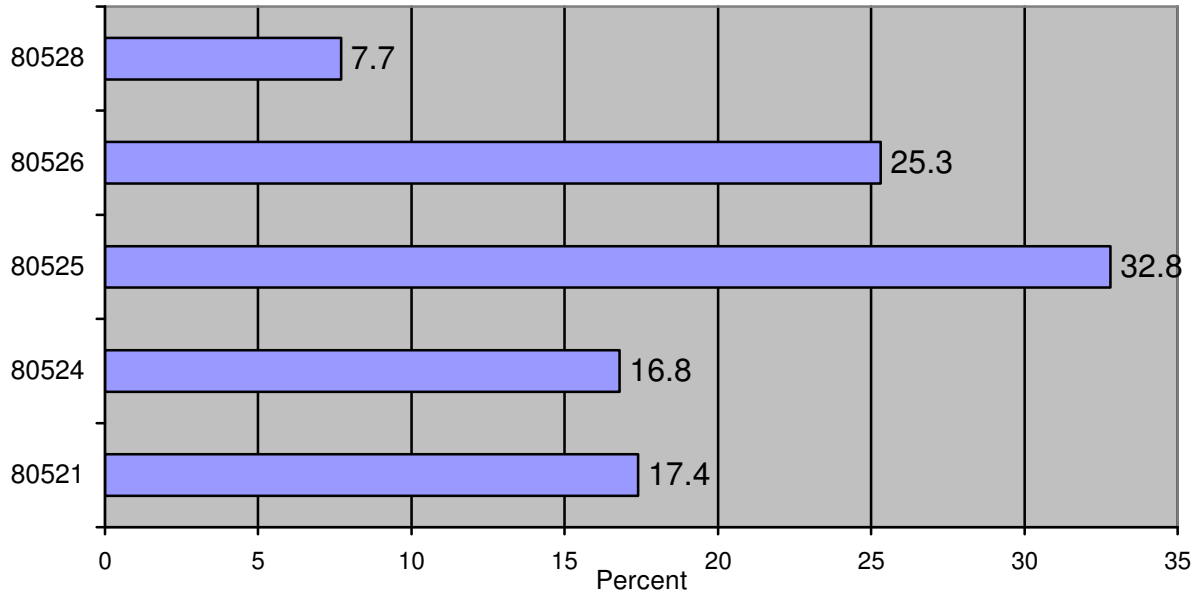
Respondent Housing



	Own	Rent/Lease	Other
2004	88	10	2
2007	75	24.3	0.7

Respondent housing is markedly different from the 2004 survey to the 2007 survey, with more respondents renting/leasing and less who own their home than in 2004.

Respondent Zip Code



Though the distribution of the surveys to the various zip codes even among all zip codes, the responses were not as evenly distributed as we hoped. Less respondents came from the 80528 zip code in 2007 (7.7%) as compared to 2004 (16%) and more from the 80525 in 2007 (32.8%) as compared to 2004 (23%).