

# North Carolina State University

## Assessing Student Attitudes Toward Sustainability Issues

Draft – for discussion purposes only



Submitted by:  
Energy Management  
Office of Sustainability  
Facilities Operations  
NC State University

June 2010

## Student Sustainability Attitude Survey Project Introduction

**Survey Project Description** – The Office of Energy Management and Office of Sustainability were interested in developing new student outreach programs at NC State University to promote energy conservation and sustainability programs. A student survey that measures current attitudes and behaviors regarding sustainability, energy, transportation, waste reduction and recycling was conducted in Feb 2010.

**Business Case** – Given the downward pressure on university budgets, a student survey was the best method to maximize limited outreach dollars by gaining a statistical understanding of student behaviors and attitudes.

**Survey Methods** – An on-line questionnaire was sent to 2,500 randomly selected enrolled NC State students, undergraduates and graduates, who live on and off campus, on Feb 1, 2010. The questionnaire was closed on Feb 19, 2010.

**Survey Response Rate and Sampling Error** – 303 students completed the questionnaire; thus, the survey had a 12.1% response rate. Based on student population, sampling frame size and response rate, the survey has a error rate of +/- 5%.

**Limitations** – The survey is subject to self-selection bias (e.g., respondents with an interest in sustainability were more likely to notice the call for participation). As such, the questionnaire results may, or may not, be representative of the entire student population.

### **Team Roster**

#### **Project Leadership:**

Paul McConocha, Energy Program Manager, Energy Management, Utilities and Engineering  
Tracy Dixon, Director, Office of Sustainability

#### **NC State Survey Project Partners:**

Office of Energy Management  
Office of Sustainability  
Waste Reduction & Recycling  
Transportation Office  
University Planning and Analysis

#### **Key Survey Findings**

- ✓ 85% of the student sample think that it is important for NC State to be a leader in sustainability and the environment.
- ✓ 86% of the student sample think that it is important for Americans to conserve personal use of energy.
- ✓ Over 85% of the NC State student sample think that it is important to recycle the products they use.
- ✓ 76% of the student sample agree with the statement, “When I conserve energy, I contribute fewer greenhouse gases to the atmosphere.”
- ✓ 68% of the student sample think global climate change will be a major problem for future generations.

### Who completed the questionnaire?

Total 2010 Undergrad and Grad Student population = 33,879  
 Randomly Generated Sampling Frame = 2,500 students  
 Response Rate = 303 students (12% of the Sample Frame)  
 Survey Period = Feb 1, 2010 to Feb 19, 2010

### What is your student classification at NC State?

Freshman	Graduate Student	Junior
Freshman 57 ( 19%)	Graduate Students 124 ( 41%)	Junior, 26 ( 9%)
		Senior 51 ( 17%)
		Sophomore 43 ( 14%)

### What is your gender?

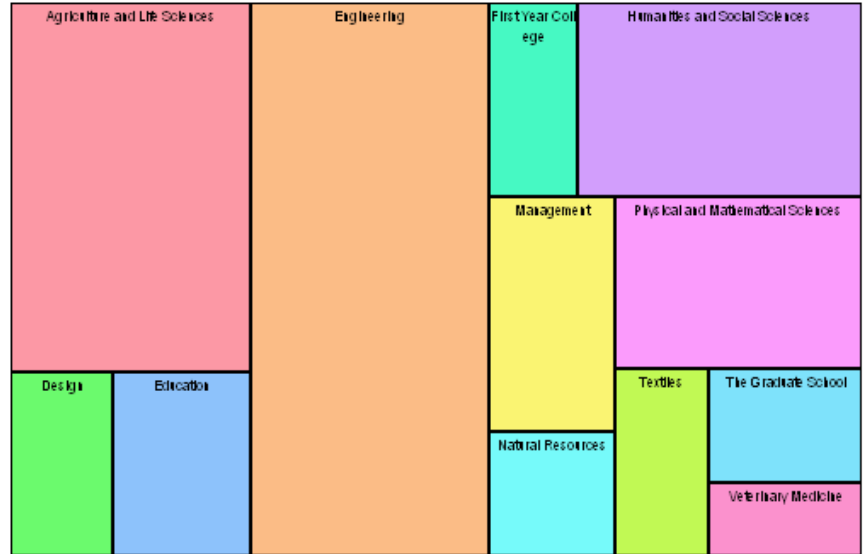
Female	Male
Female 155 ( 52%)	Male 145 ( 48%)

### Do you live on- or off-campus?

Off-campus	On-campus
Off-Campus 205 ( 68%)	On-Campus 96 ( 32%)

## What is your academic College affiliation at NC State?

College	Count (#)	Percent (%)
Engineering	84	28%
Agriculture and Life Sciences	57	19%
Humanities and Social Sciences	35	12%
Physical and Mathematical Sciences	27	9%
Management	19	6%
Education	16	5%
Design	12	4%
Textiles	11	4%
First Year College	11	4%
The Graduate School	11	4%
Natural Resources	10	3%
Veterinary Medicine	7	2%



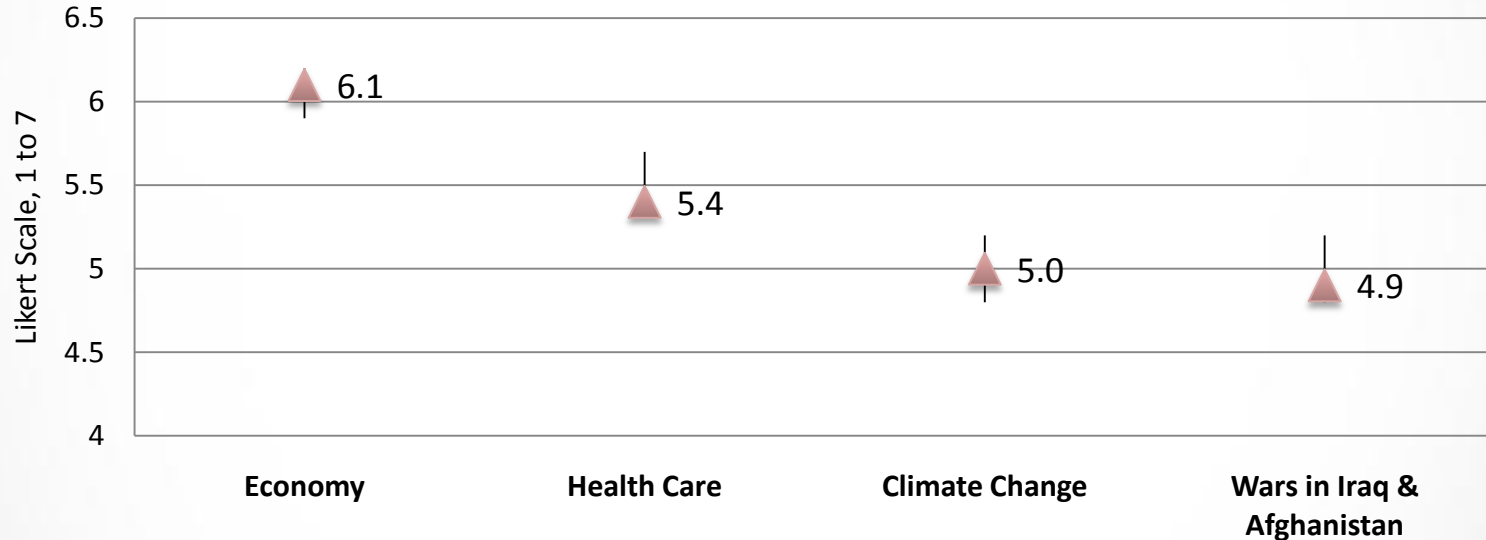
n = 300

***Finding:*** Every College is represented in the student sample. Graduate level students (41%) are over represented compared to undergraduate students (graduate students make up 25% of the student population).

**Chart Key:**

- ← Upper 95% Mean Confidence Level
- ▲ ← Mean
- ← Lower 95% Mean Confidence Level

**On a scale of 1 to 7, with 1 meaning "Very Unimportant" and 7 meaning "Very Important," how important to you is each of the following issues facing the country today?**

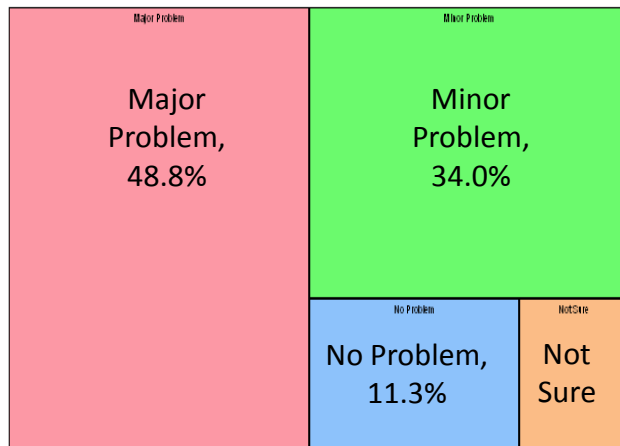


***Finding:*** The NC State respondents placed more importance on the economy than health care, climate change, or the wars in Iraq and Afghanistan.

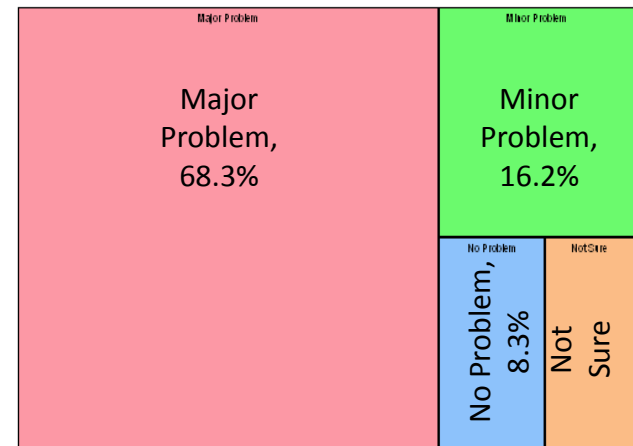
Note: The questionnaire was administered prior to Congress passing health care legislation in March 2010.

# Climate change refers to an increase in the Earth’s air and water temperature by greenhouse gases released into the atmosphere.

Do you think that global climate change will be a major problem, a minor problem, or no problem at all in your lifetime?



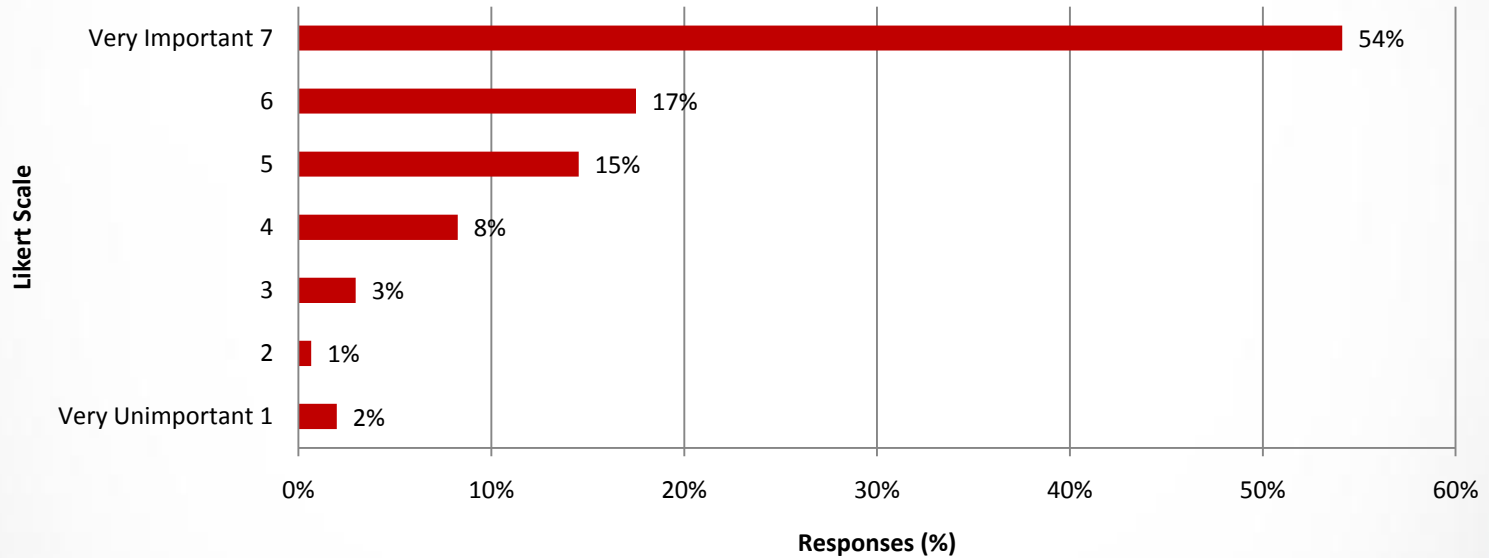
Do you think that global climate change will be a major problem, a minor problem, or no problem at all for future generations?



**Finding:** The NC State respondents overwhelmingly think that climate change will be a problem in the future, more so for future generations.

On a scale of 1 to 7, with 1 meaning “Very Unimportant” and 7 meaning “Very Important”...

### How important do you think it is for Americans to conserve personal use of energy?

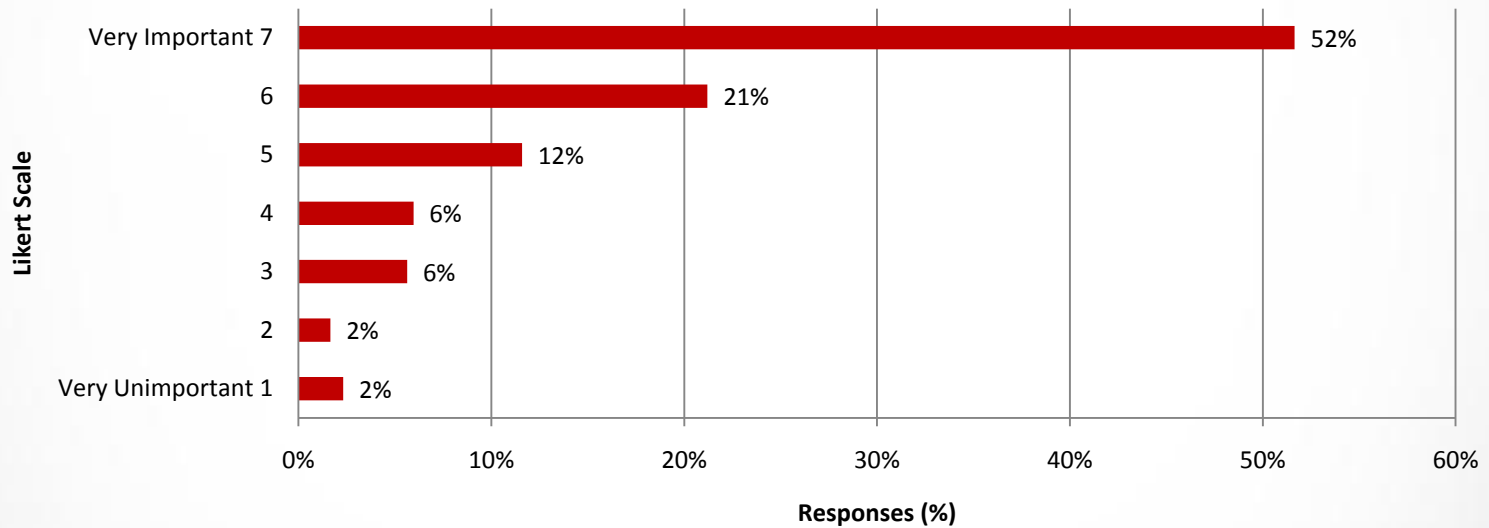


***Finding:*** 86% of the NC State student sample think that it is important for Americans to conserve personal use of energy.

(Mean = 6.0 on 7 point Likert Scale)

On a scale of 1 to 7, with 1 meaning “Very Unimportant” and 7 meaning “Very Important”...

### How important is it to you that NC State be a leader in sustainability and the environment?



***Finding:*** Over 85% of the NC State student sample think that it is important for NC State to be a leader in sustainability and the environment.

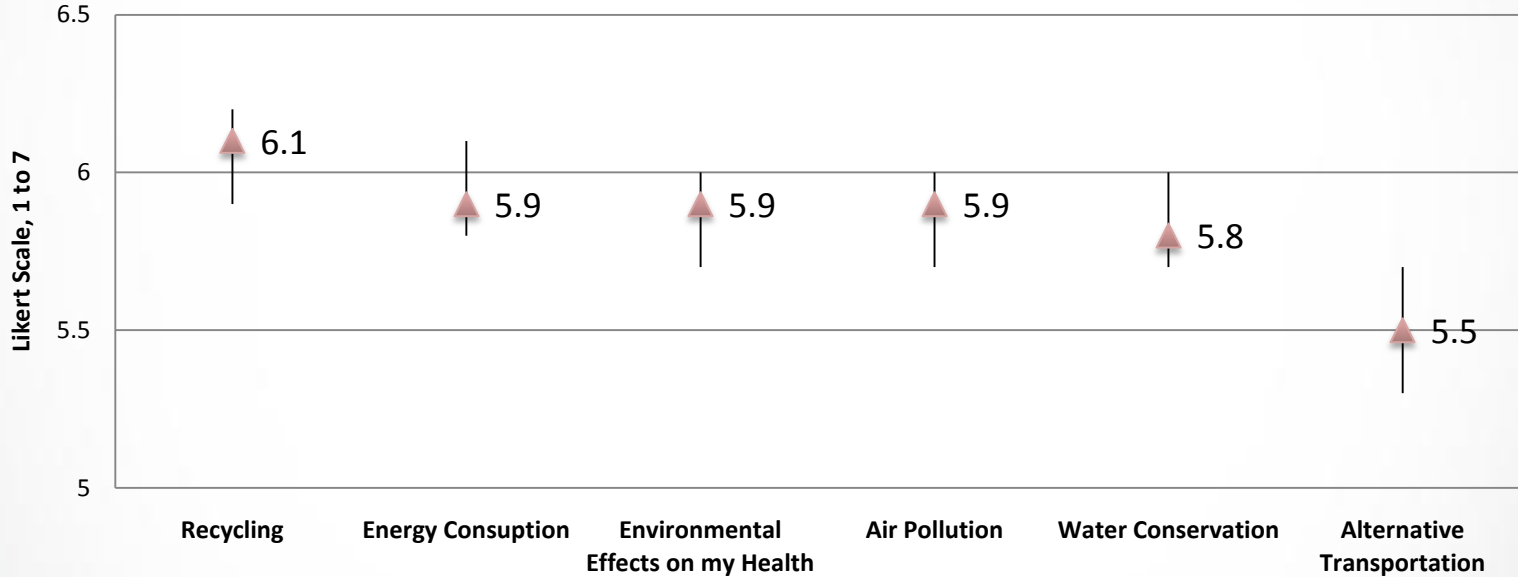
(Mean = 5.9 on 7 point Likert Scale)



**Chart Key:**

- ← Upper 95% Mean Confidence Level
- ▲ ← Mean
- ← Lower 95% Mean Confidence Level

**On a scale of 1 to 7, where 1 means "Very Unimportant" and 7 means "Very Important," how important to you are the following environmental-related issues at NC State?**

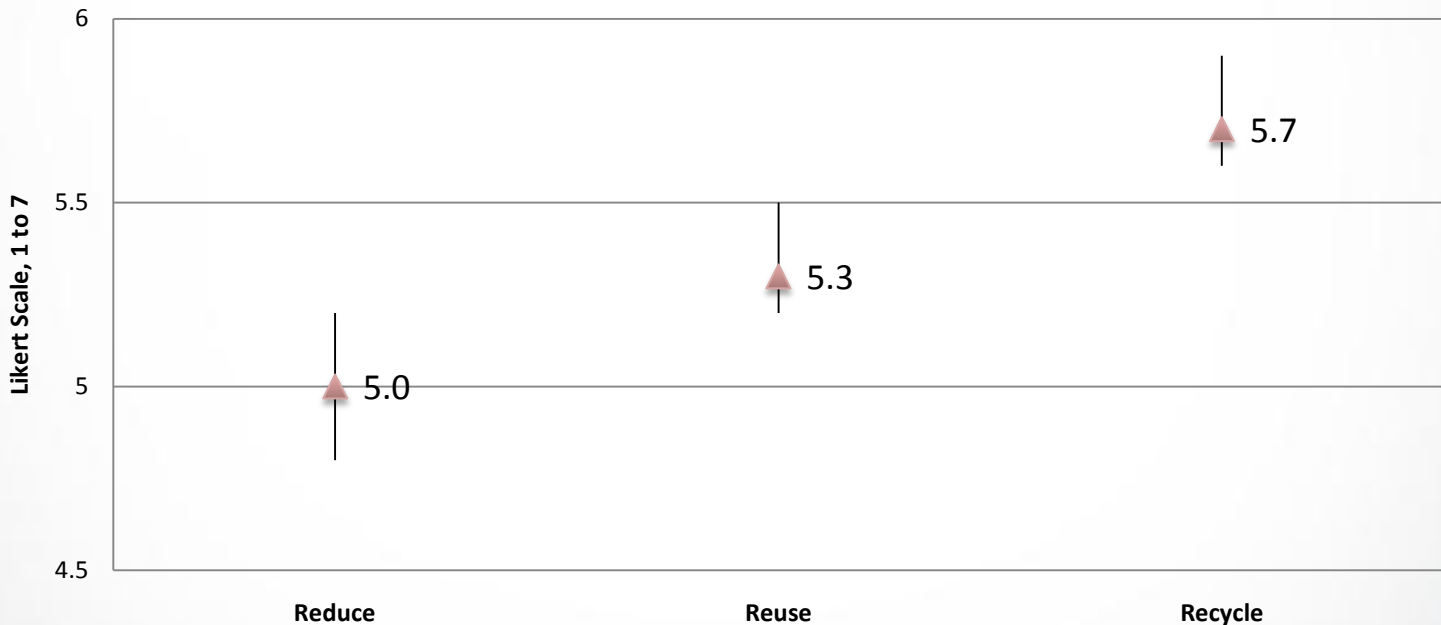


***Finding:*** NC State respondents place more importance on recycling than other environmental-related issues on campus, while alternative transportation ranked last (there is no statistical significant difference between the categories).

**Chart Key:**

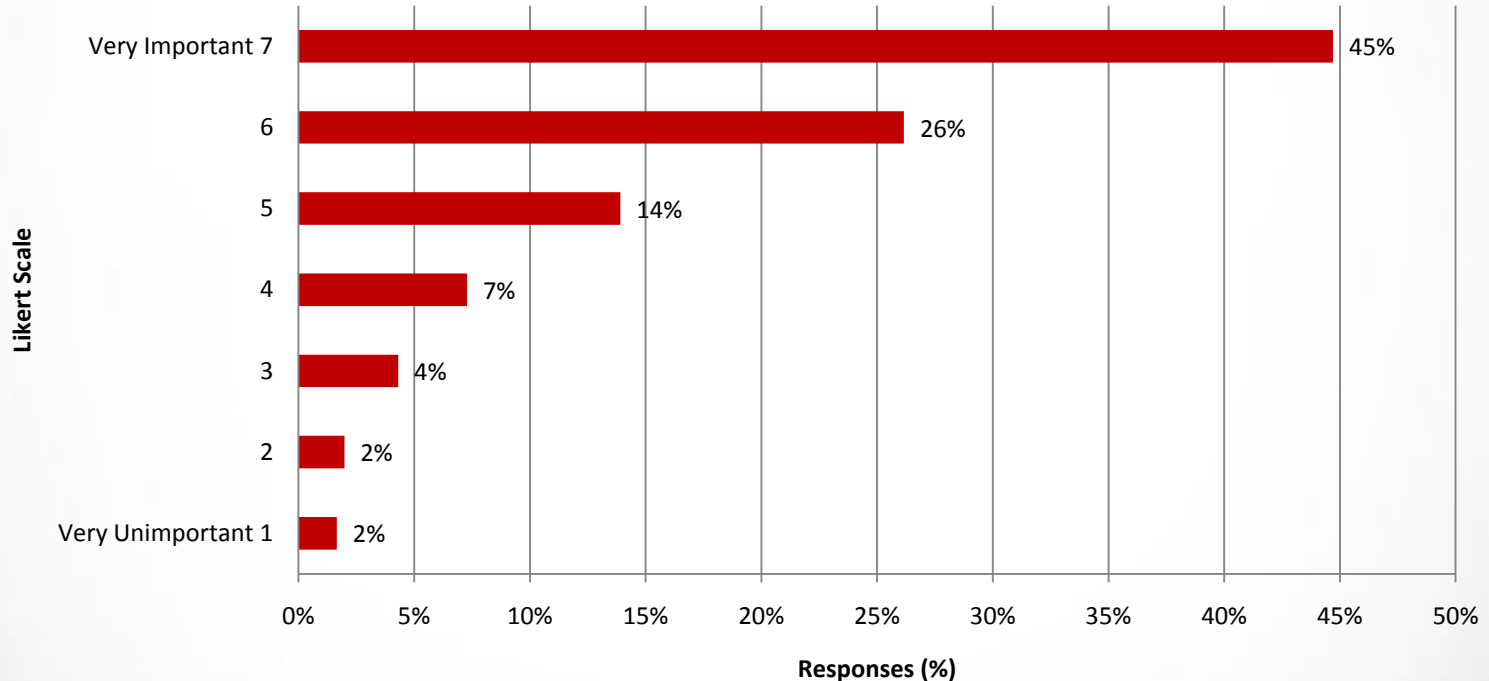
- ← Upper 95% Mean Confidence Level
- ▲ ← Mean
- ← Lower 95% Mean Confidence Level

**On a scale of 1 to 7, where 1 means "Never" and 7 means "Always," to what extent do you practice the 3-Rs; Reduce, Reuse, Recycle?**



***Finding:*** Sampled NC State students recycle more frequently than reusing or reducing waste (there is no statistical significant difference between the categories).

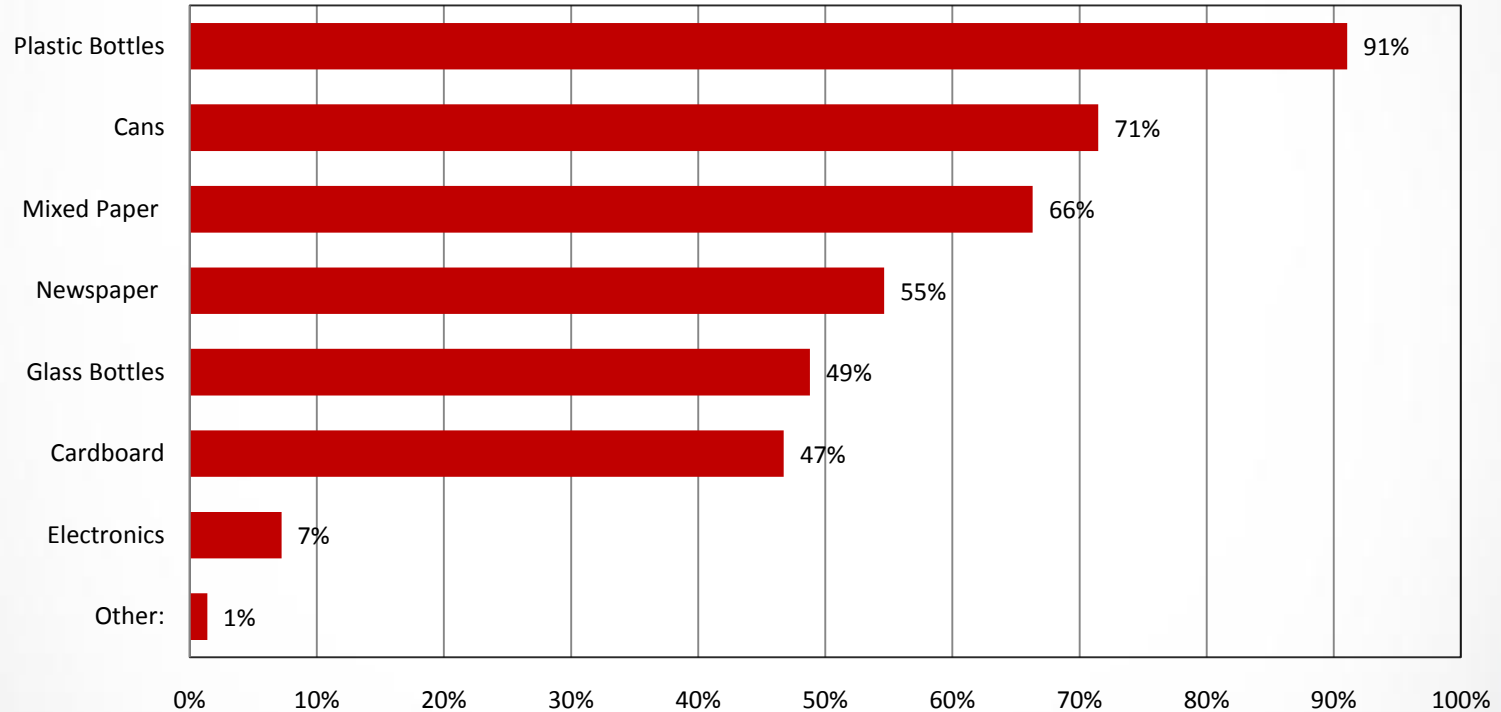
On a scale of 1 to 7, where 1 means "Very Unimportant" and 7 means "Very Important," how important is it to you to recycle the products you use?



***Finding:*** 85% of the NC State student sample think that it is important to recycle the products they use.

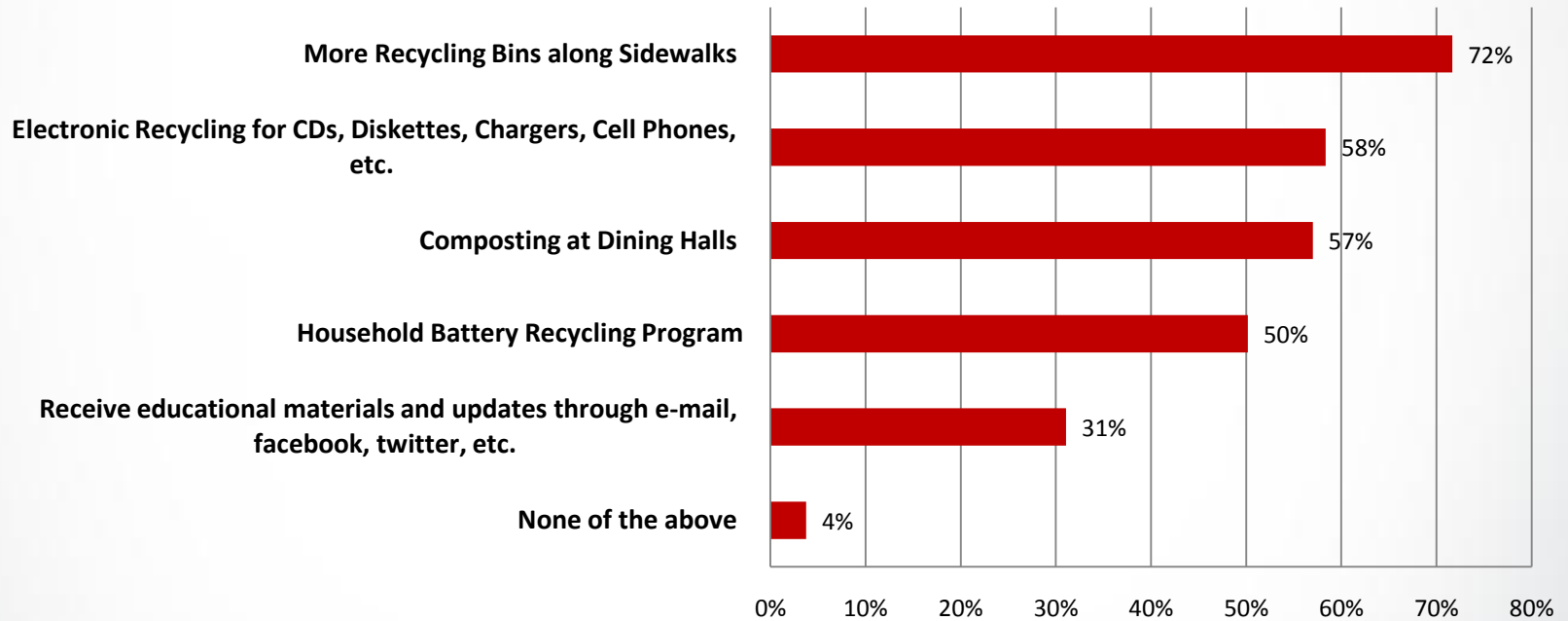
(Mean = 5.9 on 7 point Likert Scale)

**What types of items do you regularly recycle on NC State’s campus?  
(mark on all the apply)**



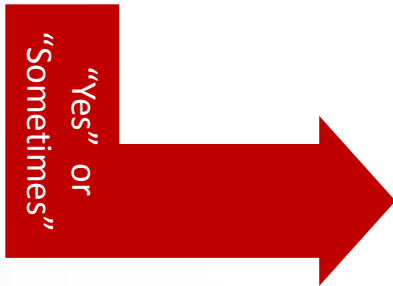
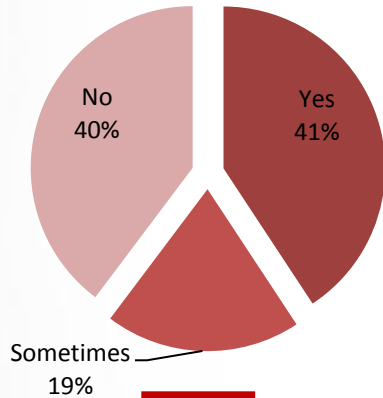
***Finding:*** The NC State respondents reported that they regularly recycle items that are segregated in campus recycling containers.

## Which of the following waste reduction programs would you like to see expanded at NC State? (mark all that apply)



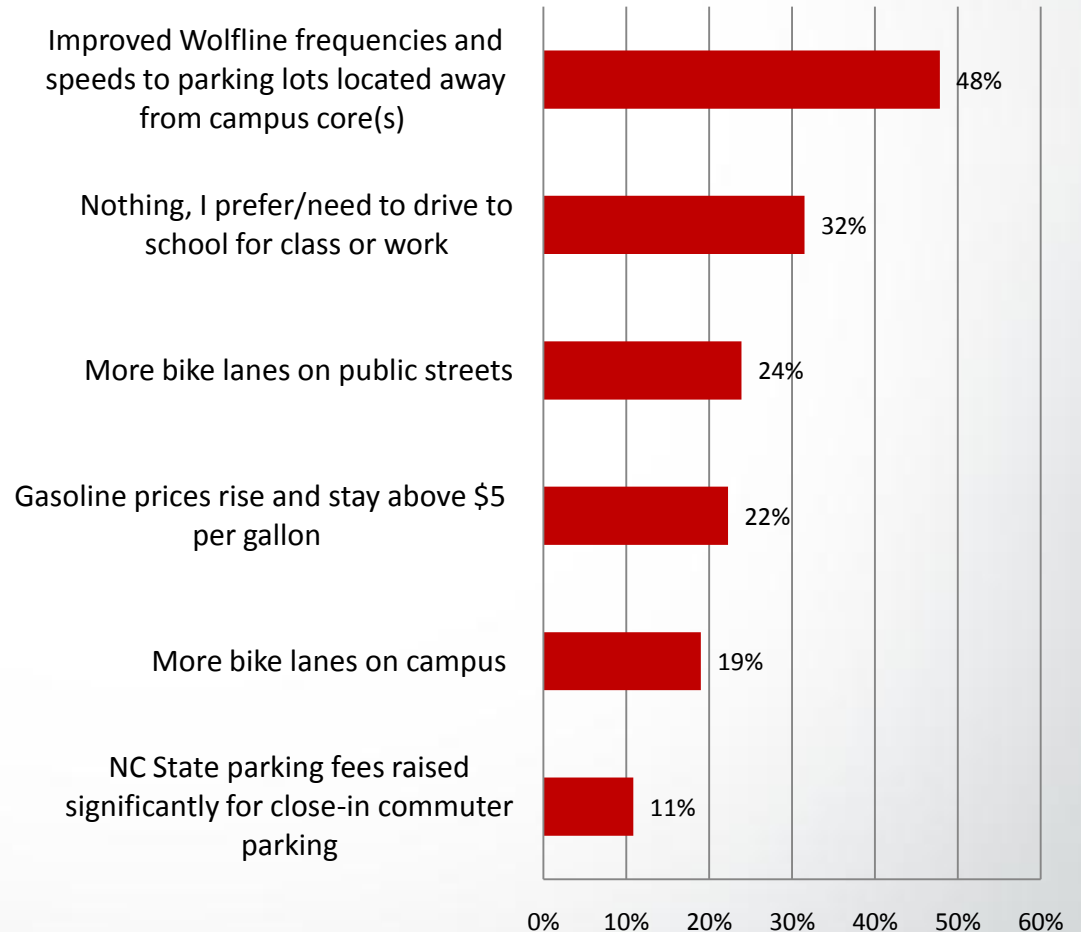
***Finding:*** The majority of NC State students would like to see more recycling bins along sidewalks and have options for electronics and battery options. Also, a majority of the sample would like to see composting of food waste at the campus dining halls.

Do you commute to the NC State Raleigh campus in a vehicle (e.g., car, light truck, or motorcycle)?

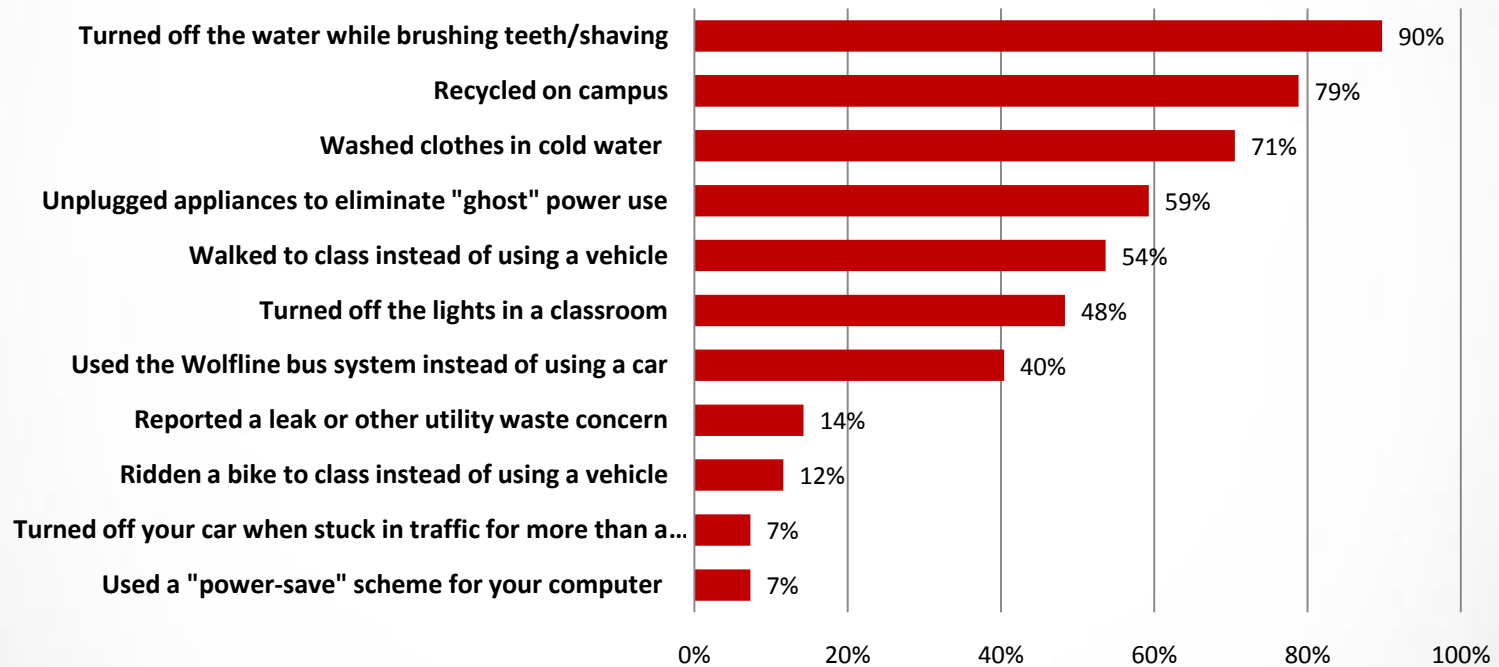


Those respondents who answered "yes" or "sometimes" said...

If you answered "Yes" or "Sometimes" to the commuting question, please indicate what would motivate you to leave your vehicle at home most of the week for school commuting? (mark all that apply)

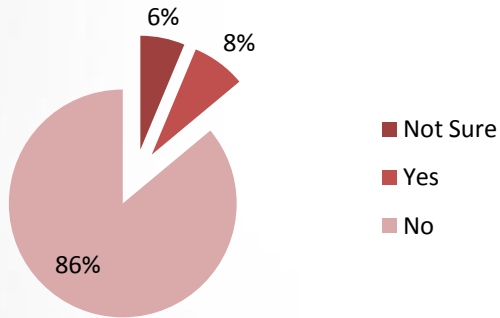


Please indicate which of the following you have done or used in the last 30-days. (mark all that apply)



***Finding:*** Water conservation, recycling, and energy conservation were recent frequent behaviors among the student sample.

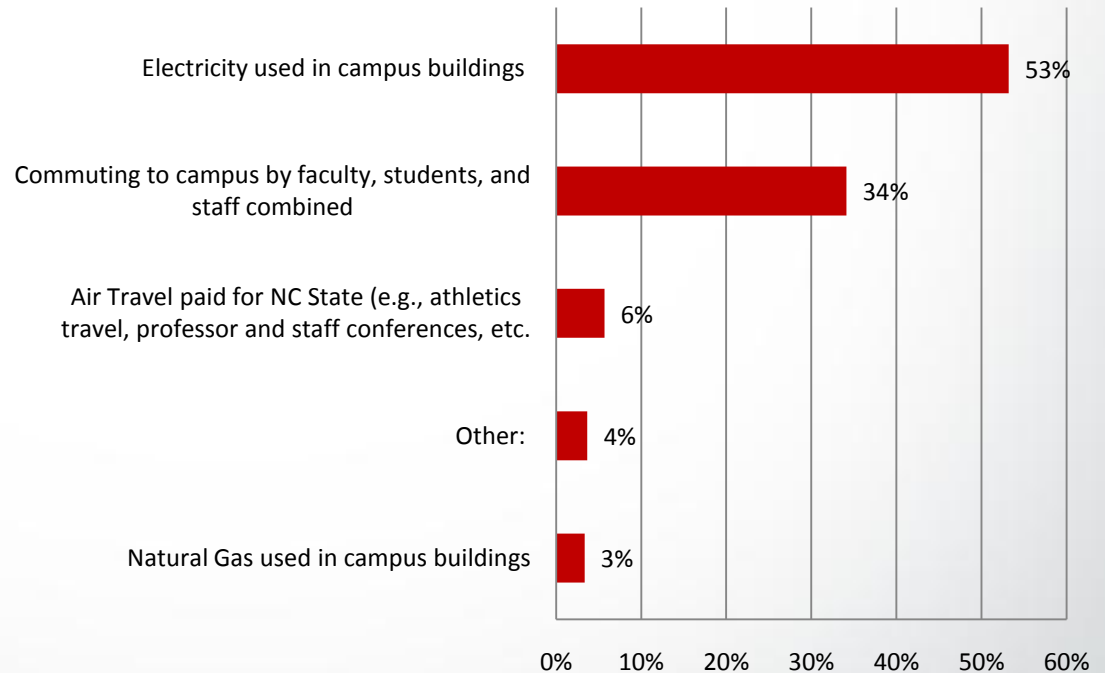
Have you read, or heard about, the report entitled "2008 Greenhouse Gas Inventory for NC State University?"



**Finding:** 86% of the NC State students have not read or heard of the 2008 Greenhouse Gas Inventory.

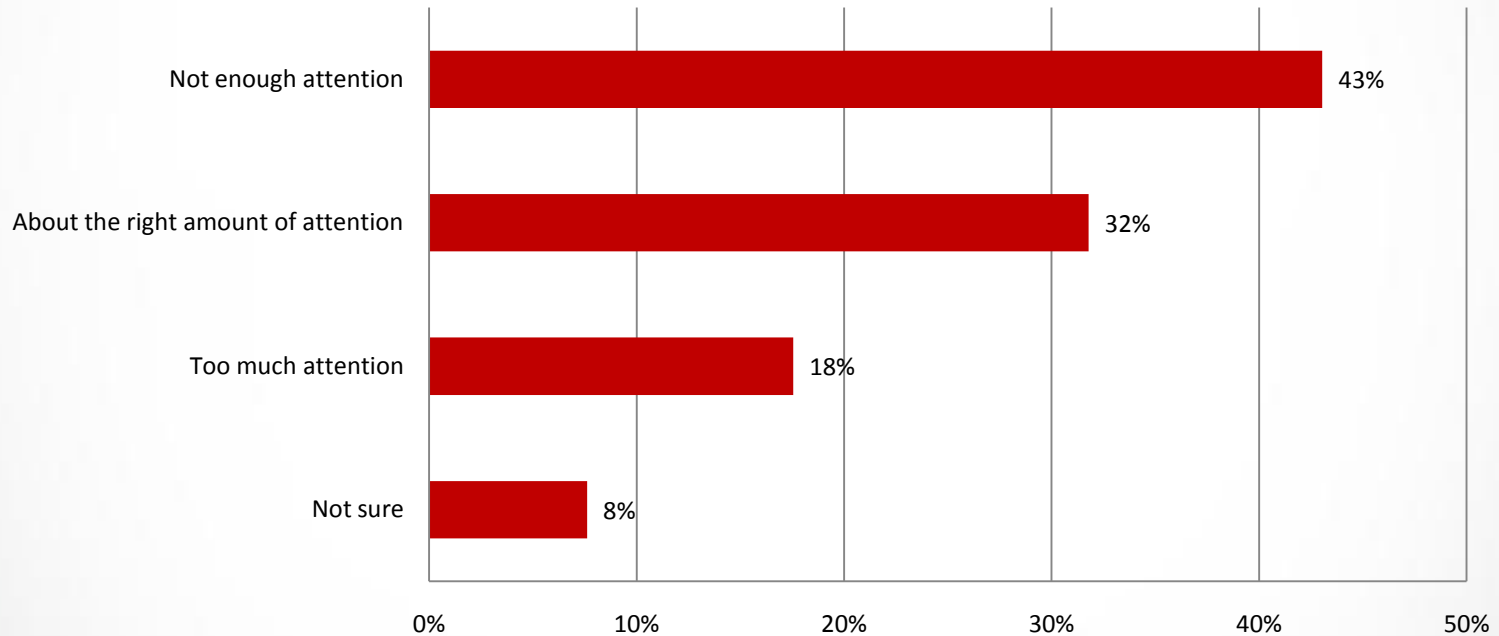
**Finding:** Only 3% selected "Natural Gas used in campus buildings" when, in fact, natural gas use is the #2 contributor to campus greenhouse gas emissions.

What do you think is the largest contributor to NC State's greenhouse gas carbon footprint?



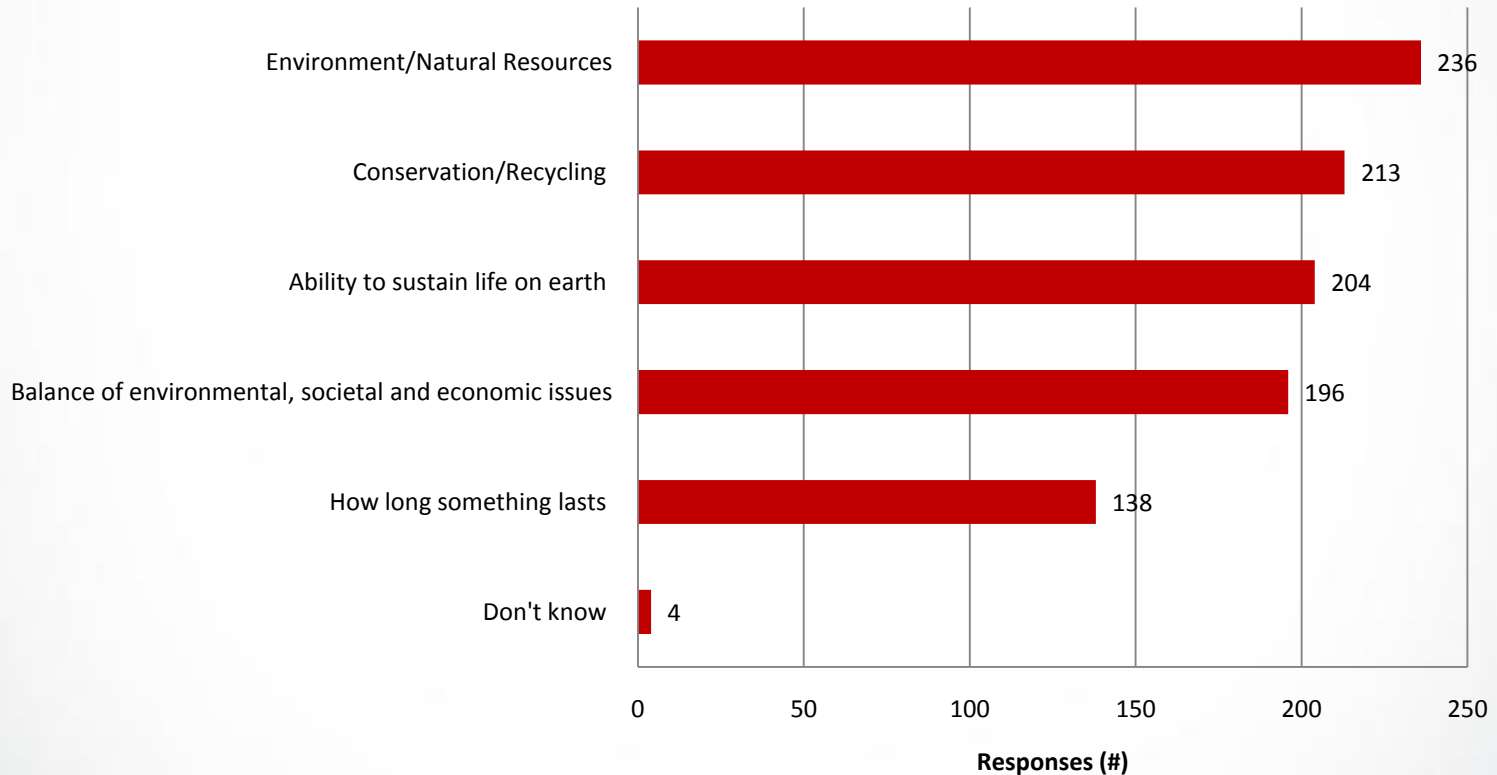


In general, do you think too much attention is given to the issue of global climate change, not enough attention is given to it, or about the right amount of attention is given to the issue of climate change?



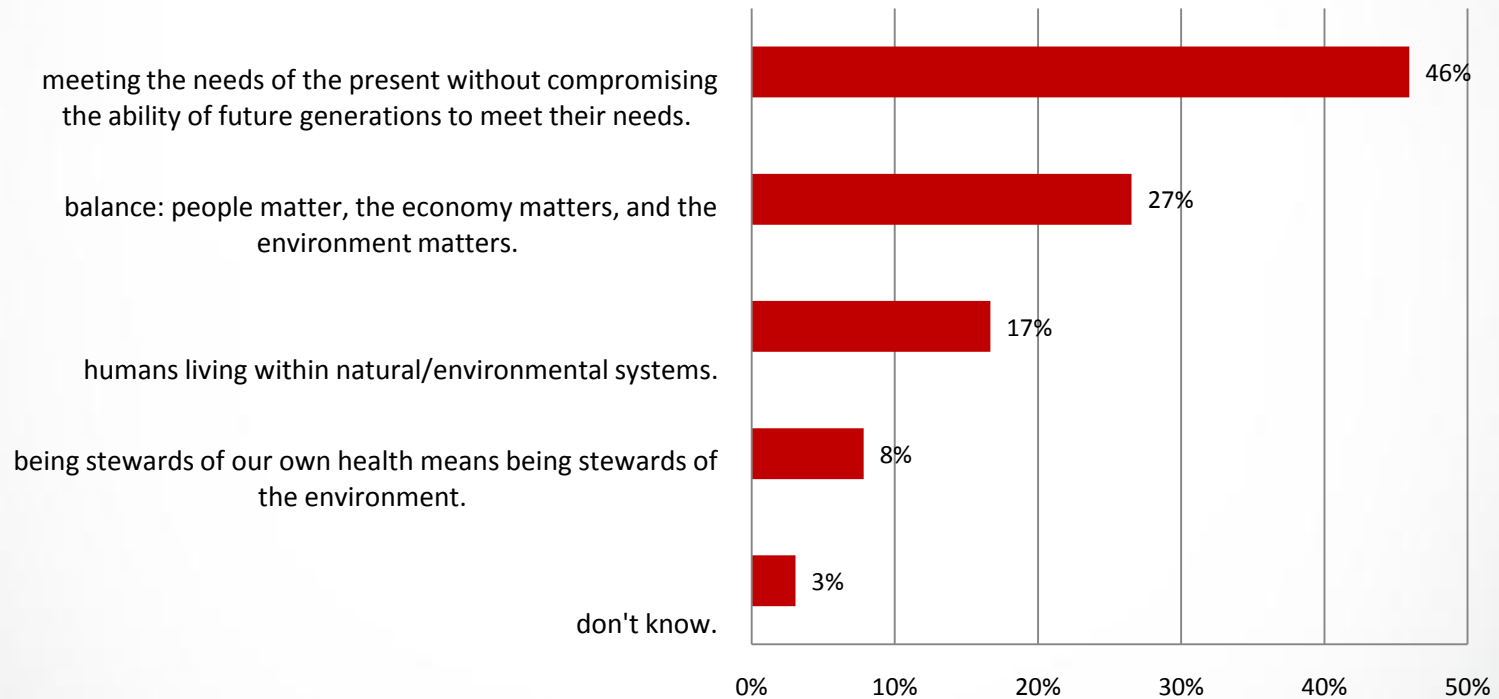
***Finding:*** Less than half (43%) of the respondents reported that attention to global climate change is not enough.

**What comes to mind when you hear the term “sustainability?”  
(mark all that apply)**



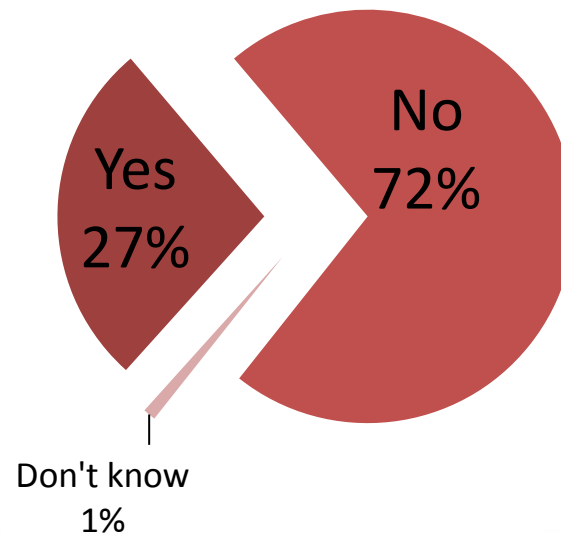
***Finding:*** The student respondent results suggests there are broad definitions of “sustainability.”

**Which of the following comes closest to what “sustainability” means to you? Sustainability is about...**



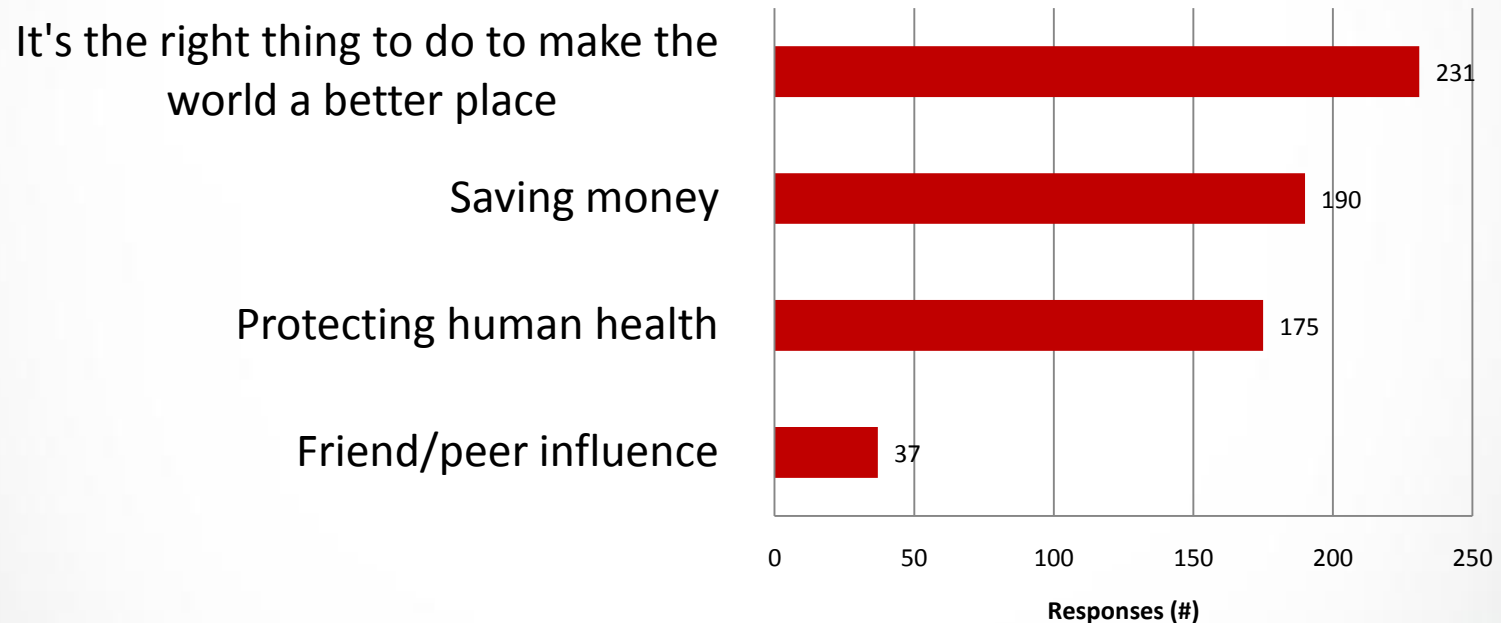
***Finding:*** Almost half of the student respondents reported that “sustainability” is about meeting the needs of the present without compromising the ability of future generations to meet their needs.

## Have you calculated your personal carbon footprint?



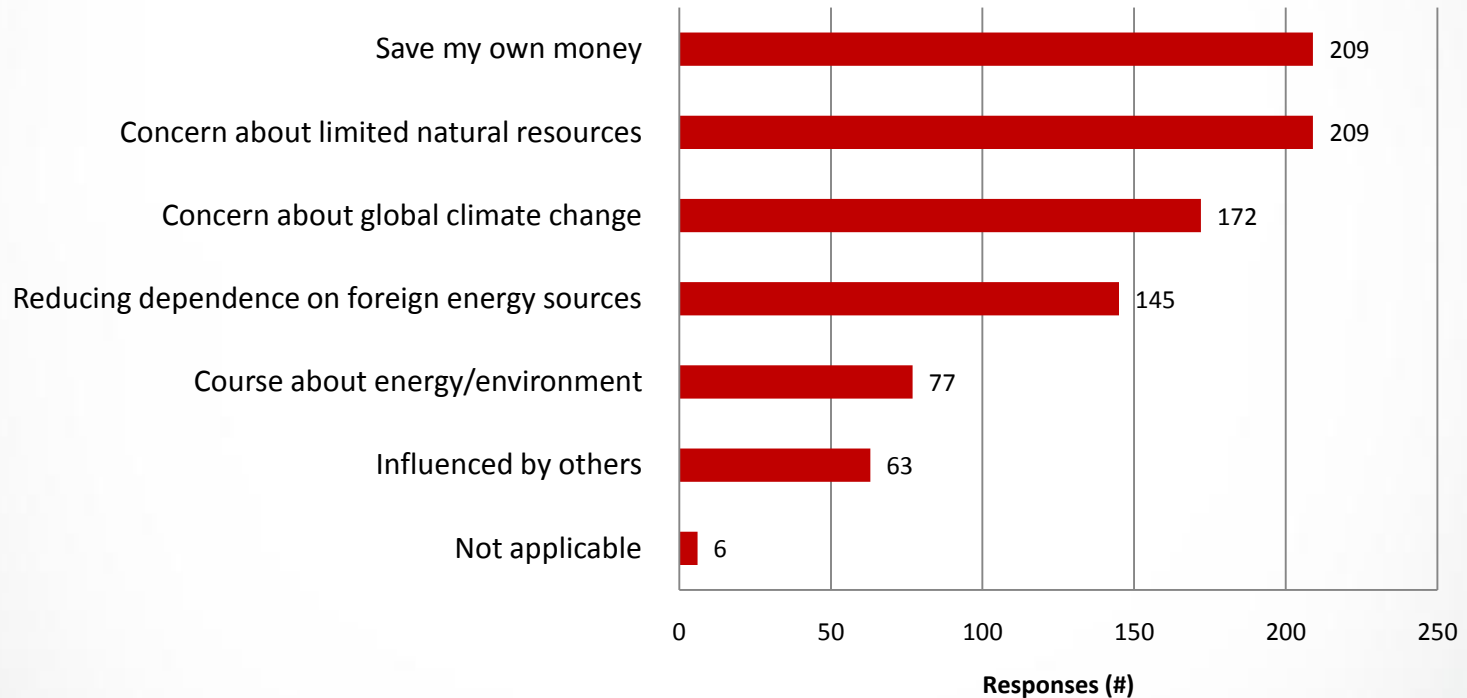
***Finding:*** 27% of the student sample have calculated their personal carbon foot print.

**Which best explains any personal motivation on your part for becoming involved in sustainability type behavior? (mark all that apply)**



***Finding:*** Many of the student respondents selected “the right thing,” “saving money,” and “protecting human health” as a motivation to becoming involved in sustainable type behavior.

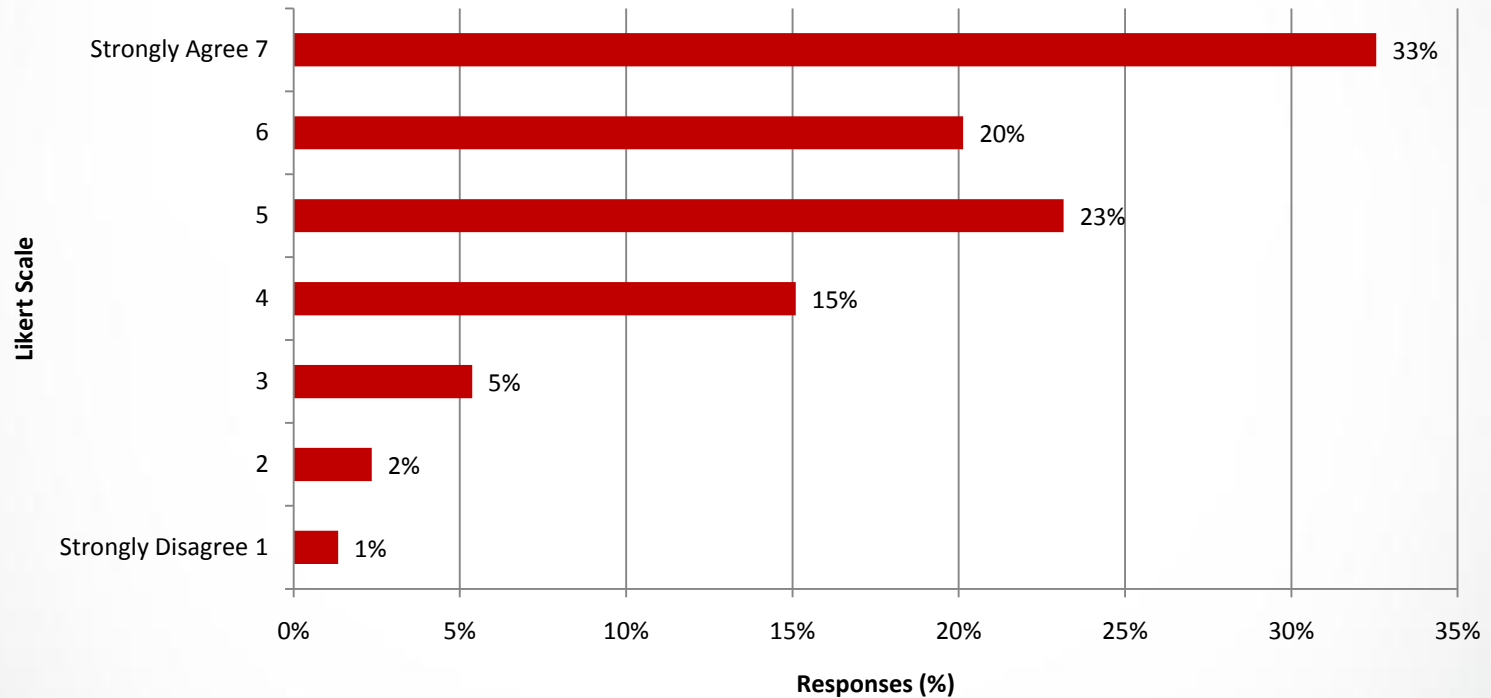
## What has influenced any energy conservation behavior on your part so far? (mark all that apply)



***Finding:*** The student respondents suggests there are broad influences that impact energy conservation behavior.

On a scale of 1 to 7, with 1 meaning “Strong Disagree” and 7 meaning “Strongly Agree” ...

"When I conserve energy, I contribute fewer greenhouse gases to the atmosphere."

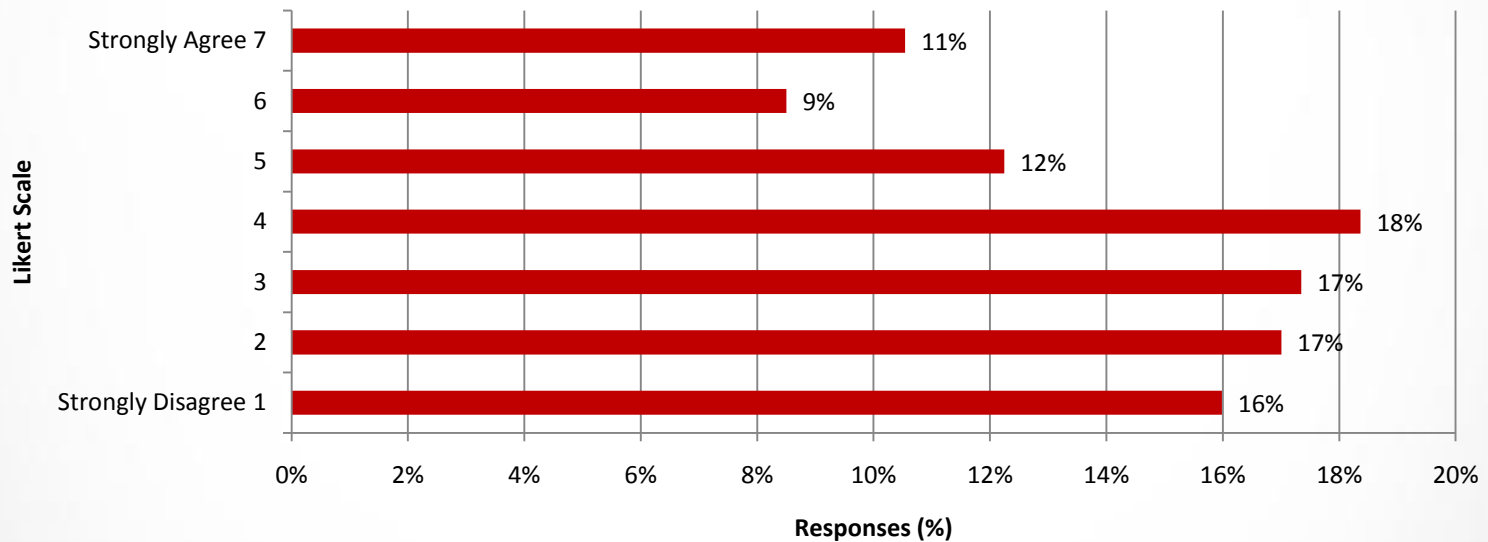


***Finding:*** 76% of the respondents agree with the statement, “When I conserve energy, I contribute fewer greenhouse gases to the atmosphere.”

(Mean = 5.5 on Likert 7 point scale)

On a scale of 1 to 7, with 1 meaning “Strong Disagree” and 7 meaning “Strongly Agree” ...

**"I have learned more about energy conservation practices since enrolling at NC State."**

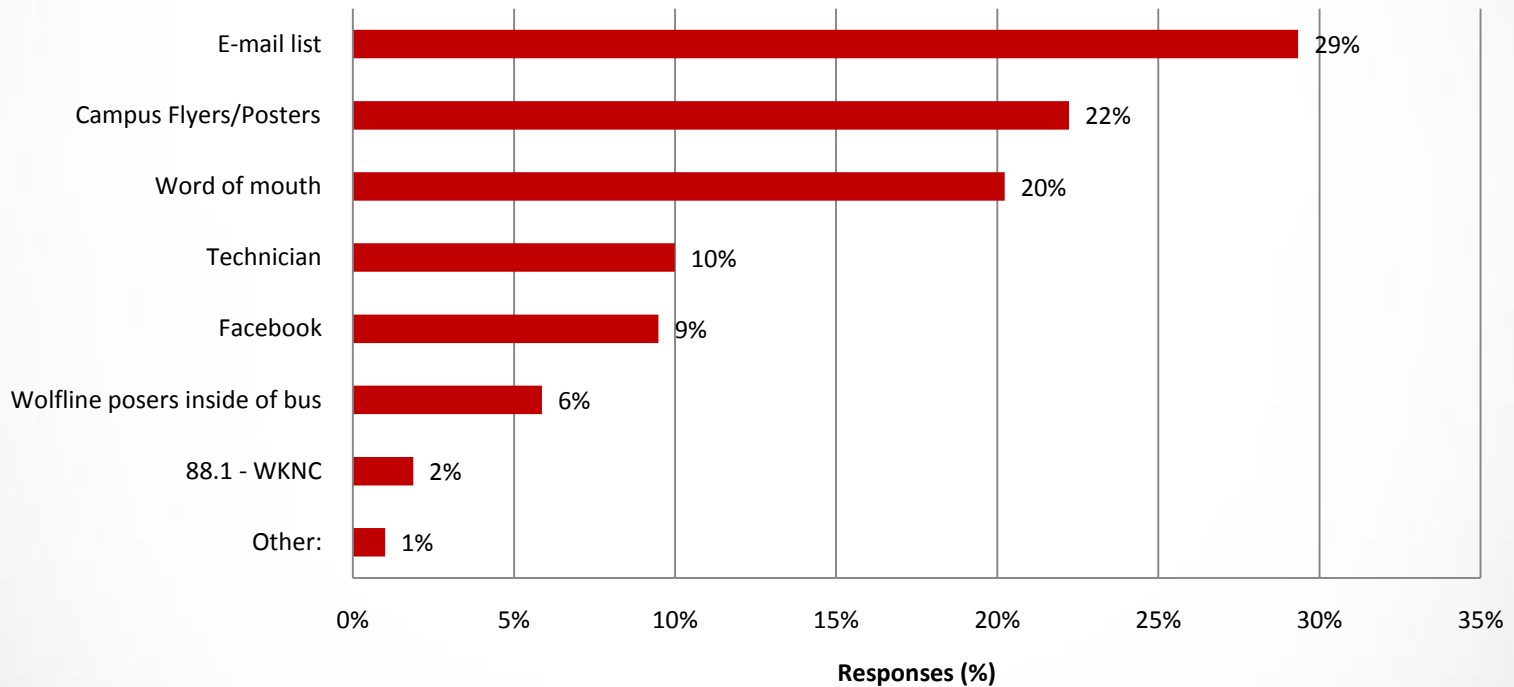


***Finding:*** The student sample responded evenly when asked the question, “I have learned more about energy conservation practices since enrolling at NC State.”

(Mean = 3.6 on 7 Point Likert Scale)



## How do you typically hear about NC State activities and events? (mark all that apply)



***Finding:*** The NC State students find out about campus activities and events primarily from e-mail, campus fliers/posters, and word of mouth.

Placeholder for outreach program  
recommendations and next steps.

## Questionnaire On-Line Introduction:

Hi!

Your opinion matters...

You have been randomly selected to participate in a NC State University survey regarding student attitudes toward various environmental issues on campus. The results will help shape future campus sustainability programs. Your responses will be compiled and reported through the University Sustainability Office web site later this spring. Please be assured that all responses will be completely confidential. The questionnaire will take less than 10 minutes to complete.

Please follow this link to complete the survey---

> <http://ceres.cals.ncsu.edu/surveybuilder/Form.cfm?TestID=9565>

Please complete the survey no later than Friday, February 19, 2010.

The survey is sponsored by the University Sustainability Office and Office of Energy Management.

Thank you for your time and input.