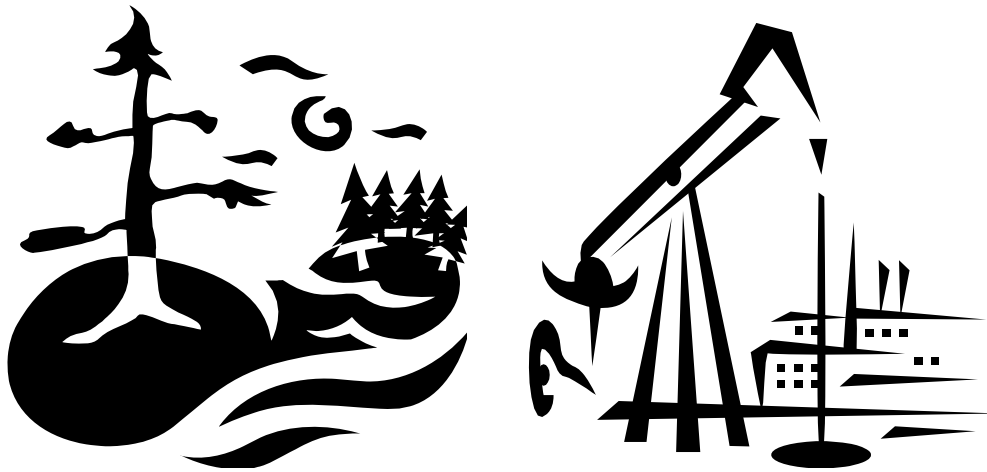


Energy Resources and Natural Environments Survey of Texans: An Illustrative Summary



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October 2008

Acknowledgement

Support for this research was provided by a grant from the U.S. Department of Energy, National Energy Technology Lab (Field Testing of Environmentally Friendly Drilling Systems, DE-FC26-05NT42658).

Table of Contents

Acknowledgement	ii
Introduction.....	1
Methodology	2
Section I Individual-Level Characteristics	6
Section II Environmental Perspectives	22
Section II Energy Issues	45
Section IV Desalination	101
Note.....	107

Introduction

This document provides an illustrative summary of the results obtained from a 2008 general population survey of individuals in Texas.

The purpose of this document is to provide insights into public perception of the energy industry and its associated issues (e.g., drilling on ecologically sensitive lands, acceptance of environmentally friendly drilling technology, desalination and use of produced water, etc.) in Texas. Moreover, attitudes and behaviors of the citizens of Texas, as well as information on selected individual-level characteristics are presented. Figures and tables are used to simplify presentation of the data. No conclusions or inferences are made. Individuals interested in statistical analyses and more detailed information should contact Dr. Gene L. Theodori at:

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Methodology

Study sites were purposely selected using region- and county-level data available from Texas Parks and Wildlife Department, the United States Census of Population and Housing, and the Railroad Commission of Texas.

The study-site selection process began at the ecological region level and narrowed to the county level. First, in accordance with the research design of the larger project, three ecological regions were selected to represent environments indicative of coastal wetlands, hardwood forests, and desert ecosystems. Using the ecological regions defined by Texas Parks and Wildlife Department,¹ Region 1 - Coastal Prairies (representing a coastal wetlands environment), Region 2 - West Gulf Coast Plain (representing a hardwood forest environment) and Region 9 - Chihuahuan Desert and Mexican Mountains in Texas (representing a desert ecosystem) were selected. Next, using United States Census of Population and Housing data and the Railroad Commission of Texas data, all counties in the three regions were empirically classified with respect to metropolitan and nonmetropolitan status and number of oil and gas wells. This categorization produced the following construct types:

- 1) counties in metropolitan or micropolitan statistical areas with a relatively high number of oil and/or natural gas wells;
- 2) nonmetropolitan counties with a relatively high number of oil and/or natural gas wells;
- 3) counties in metropolitan or micropolitan statistical areas with a relatively low number of oil and/or natural gas wells; and,
- 4) nonmetropolitan counties with a relatively low number of oil and/or natural gas wells.

¹ See http://www.tpwd.state.tx.us/huntwild/wild/birding/pif/assist/pif_regions/.

Based upon the empirical classification, one study site from each of the construct types was selected in each of the three ecological regions.

Coastal Prairies Region (coastal wetlands environment)

In the Coastal Prairies Region, the counties of Brazoria, Refugio, Aransas, and Colorado were selected. Brazoria County was chosen to represent the first construct type (i.e., a county in a metropolitan or micropolitan statistical area with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Brazoria County was 294,233; combined oil and gas well count in 2007 was 1,479.^{2,3} Refugio County was chosen to represent the second construct type (i.e., a nonmetropolitan county with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Refugio County was 7,358; total oil and gas well count in 2007 was 2,416. Aransas County was chosen to represent the third construct type (i.e., a county in a metropolitan or micropolitan statistical area with relatively low number of oil and/or natural gas wells). Estimated 2007 population in Aransas County was 24,721; combined oil and gas well count in 2007 was 198. Colorado County was chosen to represent the fourth construct type (i.e., a nonmetropolitan county with a

² County population estimates published by the U.S. Census Bureau were used (see <http://www.census.gov/popest/counties/>). Reference date for county population estimates was July 1, 2007.

³ Well counts published by the Railroad Commission of Texas were used (see <http://www.rrc.state.tx.us/divisions/og/statistics/wells/wellcount/index.html>). Reference date for well counts was September 6, 2007. For oil well counts, well types included: regular producing (a well capable of producing oil); shut-in (an inactive well); shut-in 14(B)(2) (an inactive well with valid 14(B)(2) extension); injection (a well used to inject fluid (H₂O, air, CO₂) into a productive formation); and, miscellaneous (a well used for observation, monitoring, etc.). For gas well counts, well types included: regular producing (a well capable of producing gas well gas); not eligible for allow (a well lacking required form, with serious rules violation or permit restriction); temporary abandoned (a well not being produced and does not have wellhead pressure); shut-in (a well not being produced but has wellhead pressure); shut-in 14(B)(2) (an inactive well with valid 14(B)(2) extension); injection (a well used to inject fluid (H₂O, air, CO₂) into a productive formation – does not include gas well gas injection); and, miscellaneous (a well used as observation, domestic gas supply, etc.). Neither oil nor gas well counts included wells that have been plugged and abandoned.

relatively low number of oil and/or natural gas wells). Estimated 2007 population in Colorado County was 20,666; total oil and gas well count in 2007 was 586.

West Gulf Coast Plain (hardwood forest environment)

In the West Gulf Coast Plain Region, the counties of Nacogdoches, Panola, Angelina, and Trinity were selected. Nacogdoches County was chosen to represent the first construct type (i.e., a county in a metropolitan or micropolitan statistical area with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Nacogdoches County was 62,435; combined oil and gas well count in 2007 was 1,420. Panola County was chosen to represent the second construct type (i.e., a nonmetropolitan county with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Panola County was 23,002; total oil and gas well count in 2007 was 6,303. Angelina County was chosen to represent the third construct type (i.e., a county in a metropolitan or micropolitan statistical area with a relatively low number of oil and/or natural gas wells). Estimated 2007 population in Angelina County was 82,812; combined oil and gas well count in 2007 was 66. Trinity County was chosen to represent the fourth construct type (i.e., a nonmetropolitan county with a relatively low number of oil and/or natural gas wells). Estimated 2007 population in Trinity County was 14,168; total oil and gas well count in 2007 was 42.

Chihuahuan Desert and
Mexican Mountains in Texas (desert environment)

In the Chihuahuan Desert and Mexican Mountains in Texas, the counties of Pecos, Reeves, El Paso, and Brewster were selected. Pecos County was chosen to represent the first construct type (i.e., a county in a metropolitan or micropolitan statistical area with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Pecos County was 15,969; combined oil and gas well

count in 2007 was 6,857. Reeves County was chosen to represent the second construct type (i.e., a nonmetropolitan county with a relatively high number of oil and/or natural gas wells). Estimated 2007 population in Reeves County was 11,183; total oil and gas well count in 2007 was 1,524. El Paso County was chosen to represent the third construct type (i.e., a county in a metropolitan or micropolitan statistical area with a relatively low number of oil and/or natural gas wells). Estimated 2007 population in El Paso County was 734,669; combined oil and gas well count in 2007 was 0. Brewster County was chosen to represent the fourth construct type (i.e., a nonmetropolitan county with a relatively low number of oil and/or natural gas wells). Estimated 2007 population in Brewster County was 9,239. As with El Paso County, there were no oil or gas wells in Brewster County in 2007.

During the spring of 2008, a survey questionnaire titled “Energy Resources & Natural Environments: A Survey of Texans” was mailed to a randomly selected sample of 5,948 households drawn from the twelve Texas counties. A cover letter explaining the purpose of the study and an addressed postage-paid return envelope accompanied the questionnaire. The cover letter stated that the questionnaire was to be completed by the adult in the household who most recently celebrated his or her birthday.

Approximately four weeks after the initial mailing, a second wave of surveys was mailed. Then, approximately four weeks after the second mailing, a third and final wave was mailed.

The survey instrument, organized as a self-completion booklet, contained 46 questions and required approximately 40 minutes to complete. After three mailings, 1,228 surveys were completed and returned.

Section I

Individual-Level Characteristics

Figures 1 through 14 and Table 1 summarize select individual-level traits of the survey respondents. Included here are characteristics such as:

- gender (Figure 1);
- age (Figure 2);
- marital status (Figure 3);
- ethnicity (Figure 4);
- level of education (Figure 5);
- household income (Figure 6);
- home ownership (Figure 7);
- political party affiliation (Figure 8);
- political views (Figure 9);
- length of residence in current community (Figures 10 and 11);
- mineral rights ownership (Figure 12);
- royalties earned from mineral rights (Figure 13);
- occupational affiliation with oil and natural gas industry (Figure 14); and,
- employment status of family members, close friends, and acquaintances in occupations related to the oil and natural gas industry (Table 1).

Figure 1

Gender

(n = 1204)

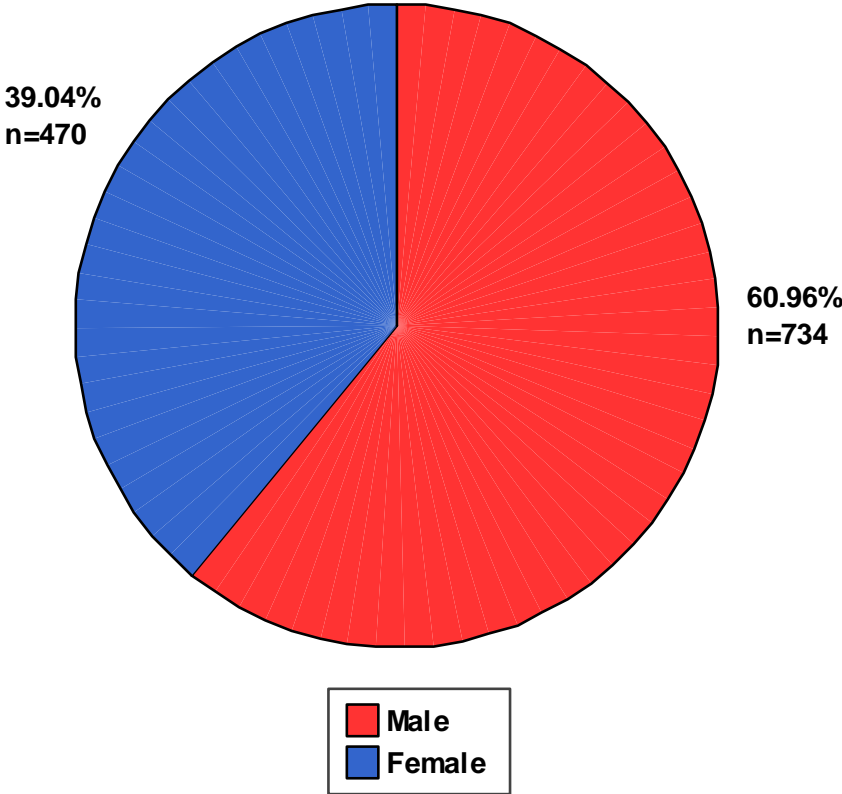


Figure 2

Age

(n = 1193)

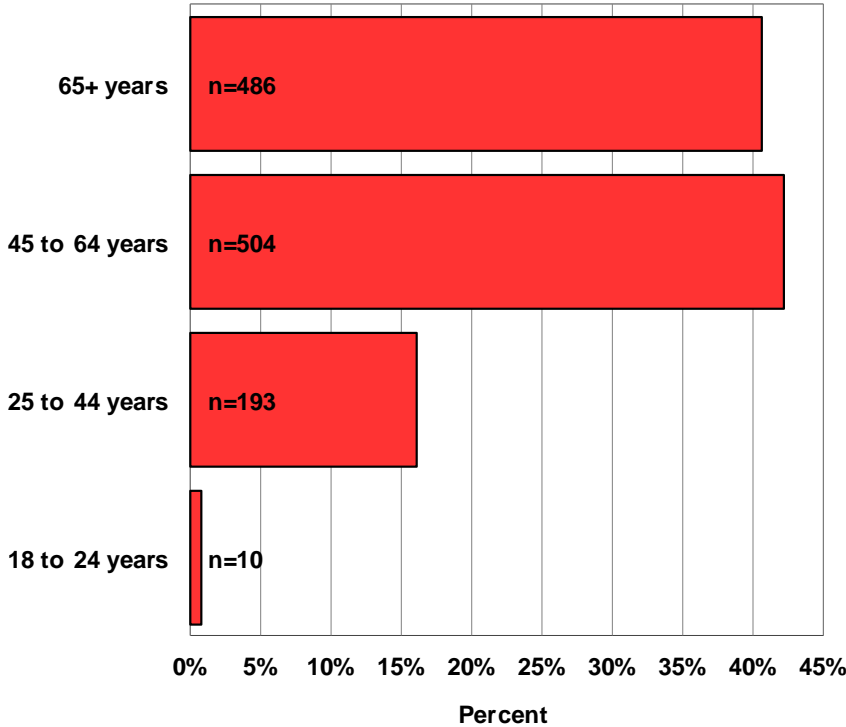


Figure 3

Marital status

(n = 1203)

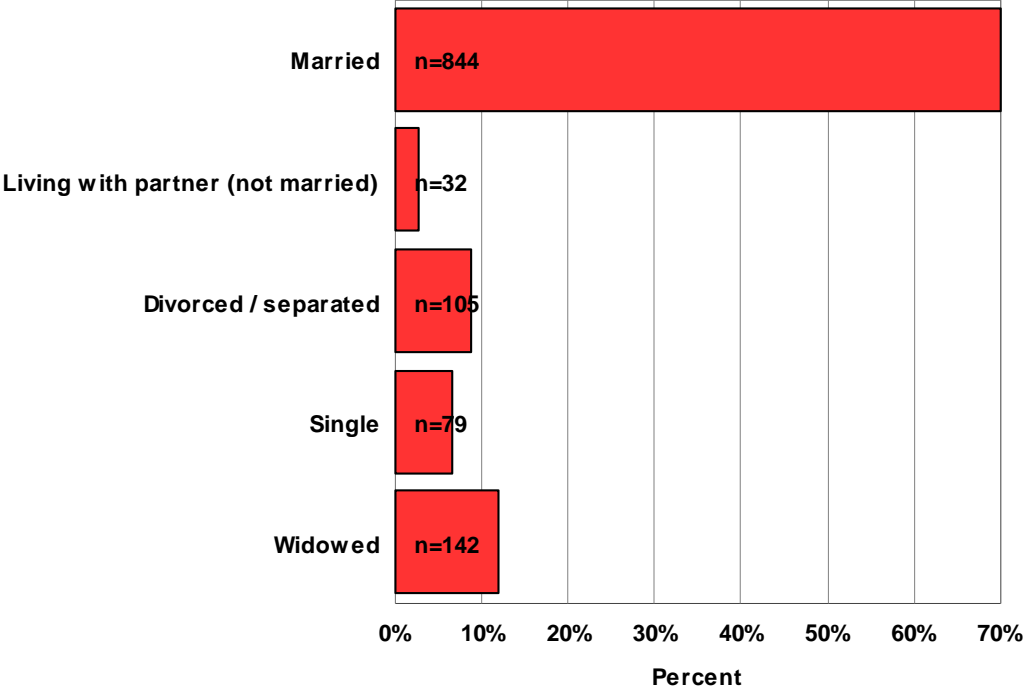


Figure 4

Ethnicity

(n =1190)

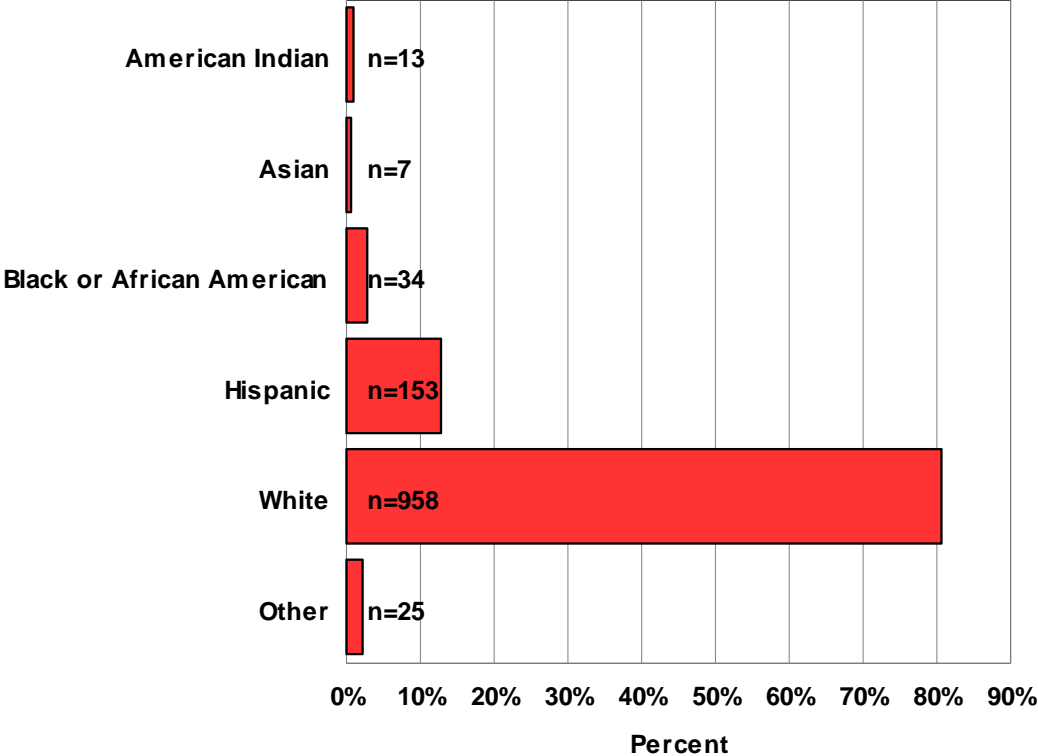
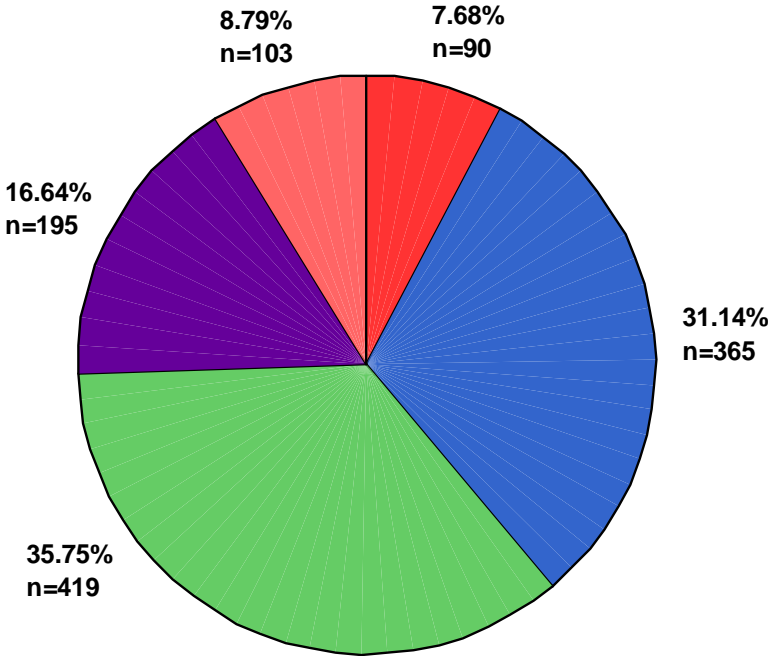


Figure 5

Level of education

(n = 1172)



- Did not complete high school
- Completed high school or equivalent
- Some college or post high school training
- College degree
- Graduate school or professional training (beyond college)

Figure 6

Household income

(n = 1110)

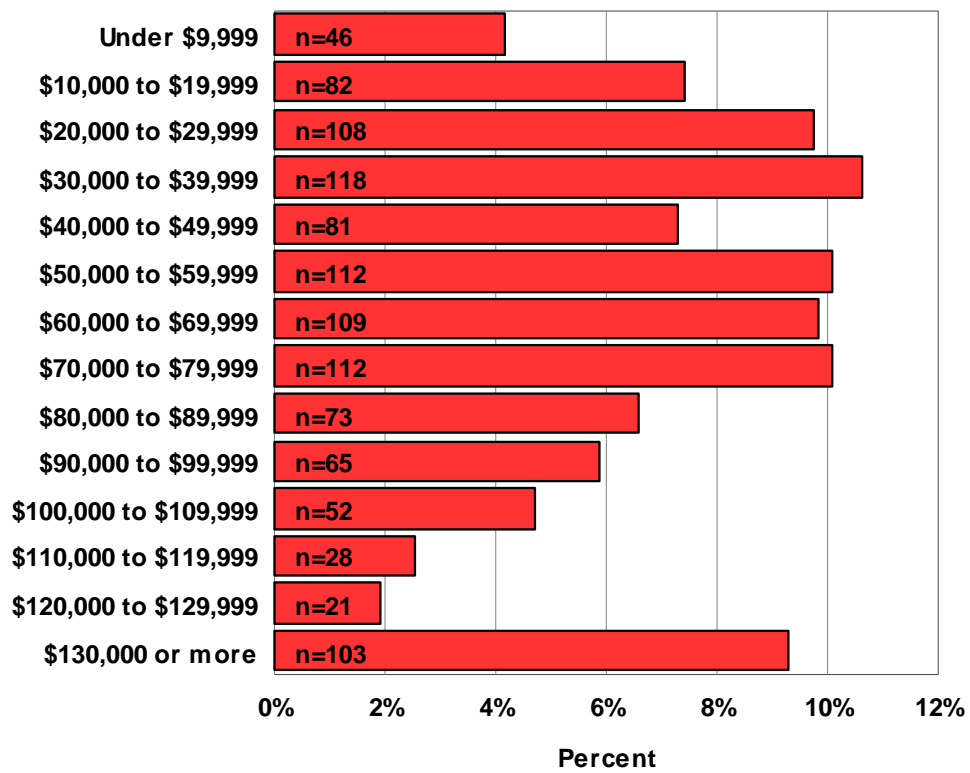


Figure 7

Home ownership

(n = 1207)

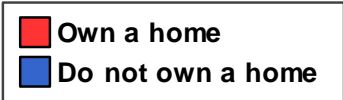
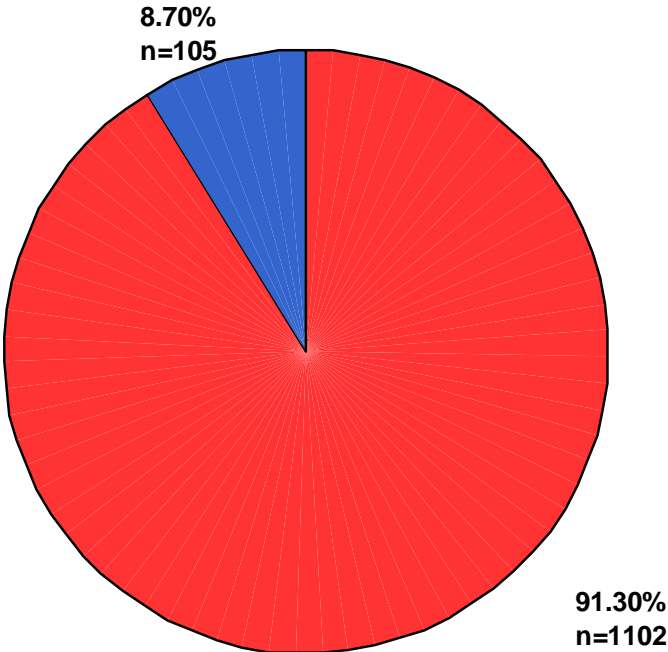


Figure 8

Political party affiliation

(n = 1144)

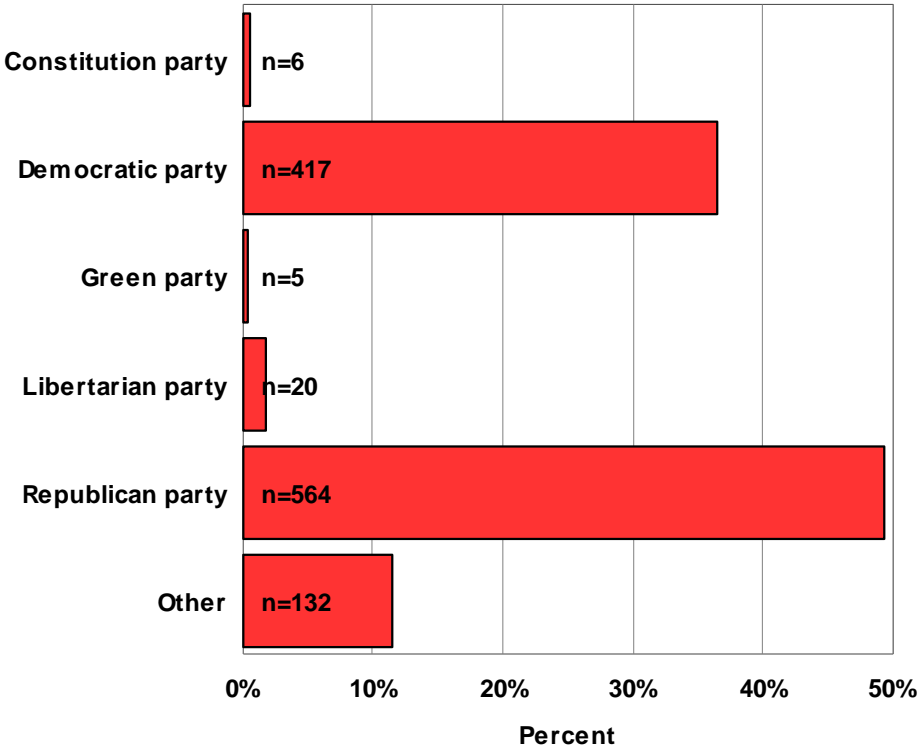


Figure 9

Political views

(n = 1157)

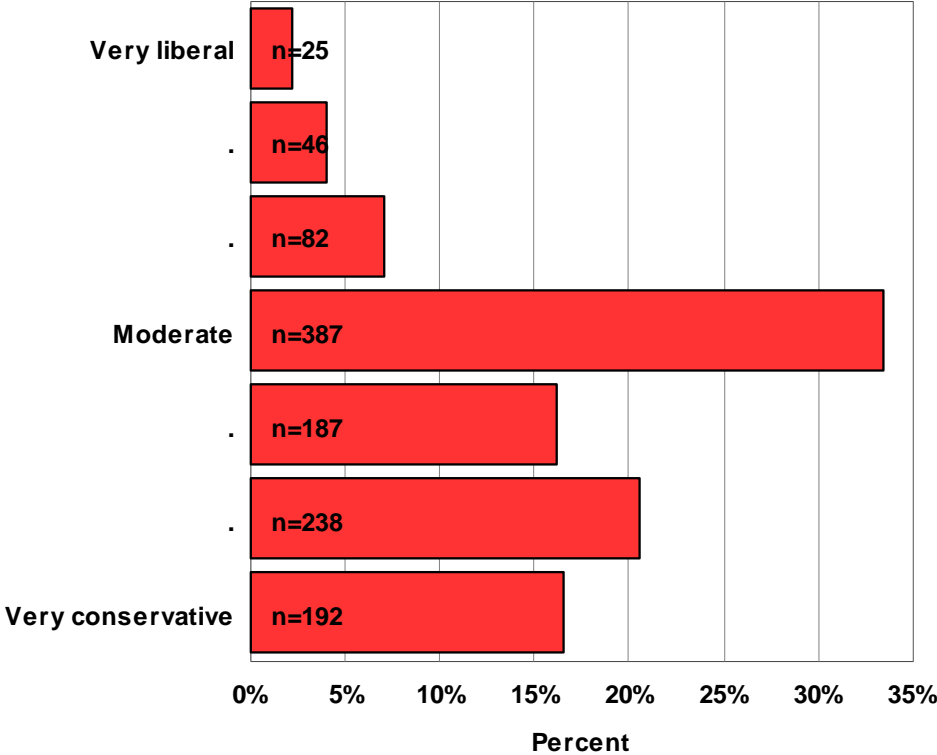


Figure 10

Length of residence in current community

(n = 1171)

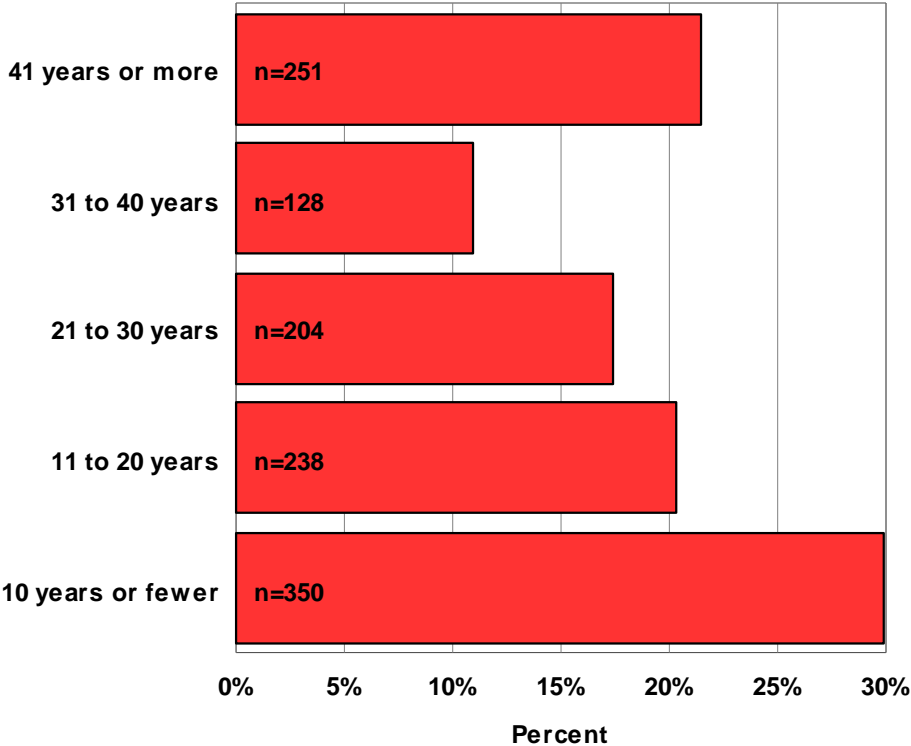


Figure 11

Life-long resident of the community

(n = 1185)

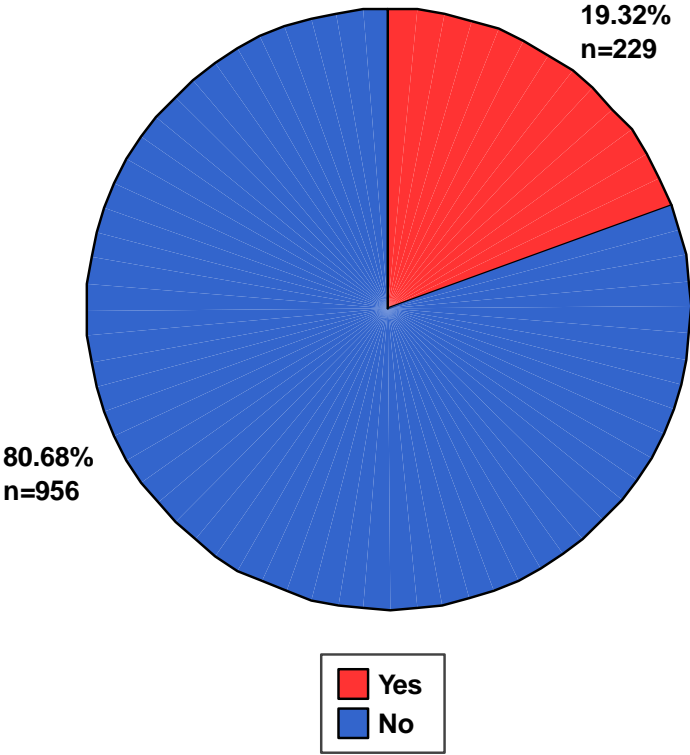


Figure 12

Ownership of mineral rights in Texas

(n = 1181)

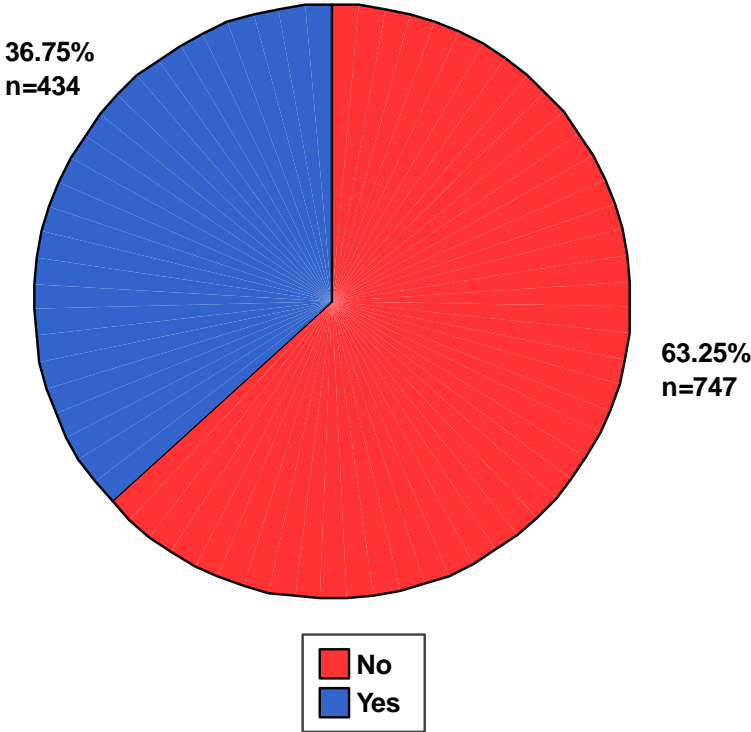


Figure 13

Currently receiving royalties from mineral rights

(n = 420)

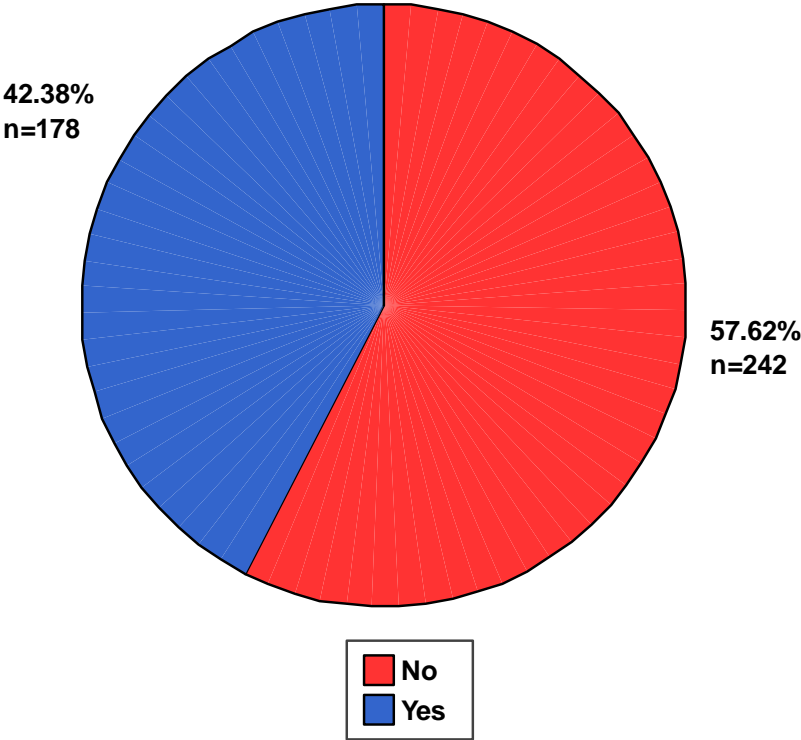


Figure 14

Ever employed in an occupation related to the oil and natural gas industry

(n = 1204)

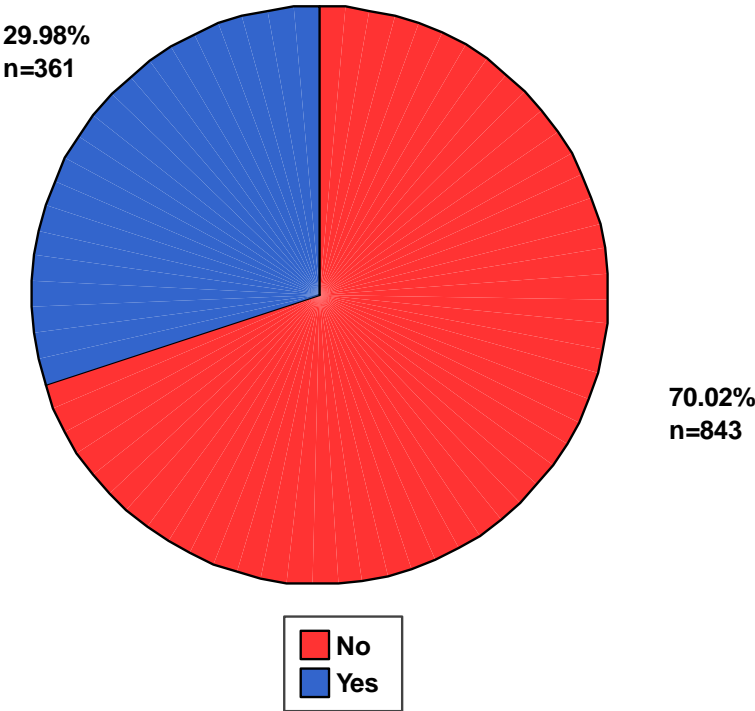


Table 1

Family members, close friends, or acquaintances ever employed in occupation related to the oil and natural gas industry

Relationship to the respondent:	Yes	No	n
Family members	45.4%	54.6%	1129
Close friends	53.2%	46.8%	1095
Acquaintances	68.2%	31.8%	1108

Section II

Environmental Perspectives

Figures 15a through 21 and Table 2 illustrate respondents' perspectives on the natural environment. Included here are:

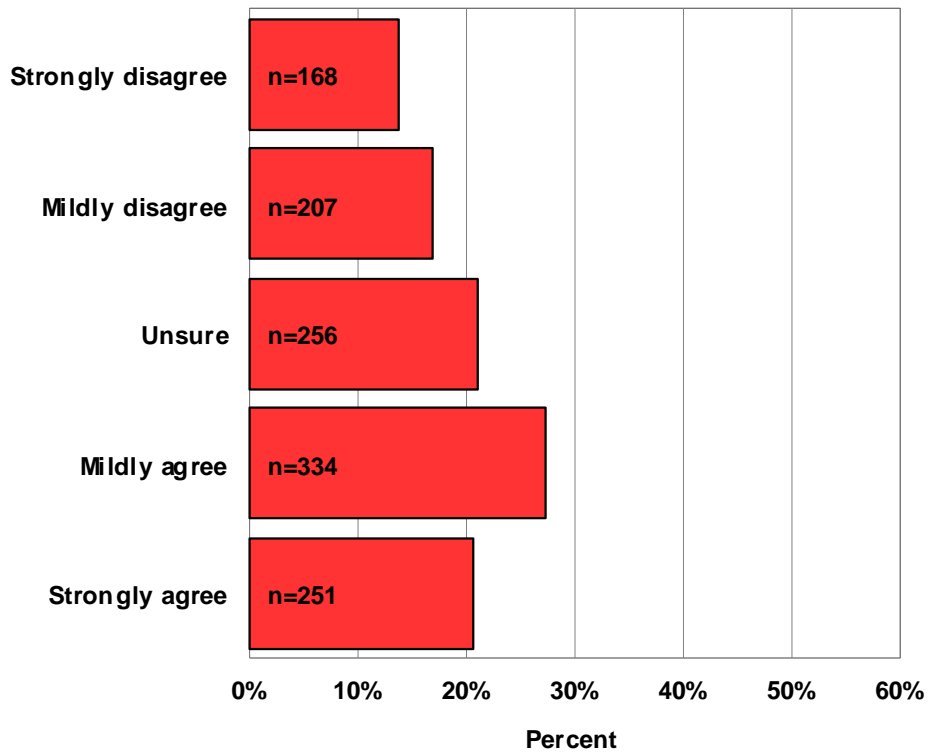
- opinions on the relationship between humans and the environment (Figures 15a through 15o);
- position on environmental issues (Figure 16);
- memberships in environmental and/or wildlife conservation groups (Figures 17 and 18 and Table 2);
- contributions of time and money to environmental and/or conservation groups (Figures 19 and 20); and,
- beliefs on the tradeoffs between the environment and the economy (Figure 21).

NOTE: Means and standard deviations are reported for Figures 15a through 15o. Response categories for items shown in Figures 15a, 15c, 15e, 15g, 15i, 15k, 15m, and 15o are coded as: 1 (strongly disagree), 2 (mildly disagree), 3 (unsure), 4 (mildly agree), and 5 (strongly agree). Agreement with these items reflects a pro-environmental orientation. Conversely, response categories for items shown in Figures 15b, 15d, 15f, 15h, 15j, 15l, and 15n are coded as: 1 (strongly agree), 2 (mildly agree), 3 (unsure), 4 (mildly disagree), and 5 (strongly disagree). Disagreement with these items reflects a pro-environmental orientation.

Figure 15a

We are approaching the limit of the number of people the earth can support.

(n = 1216)

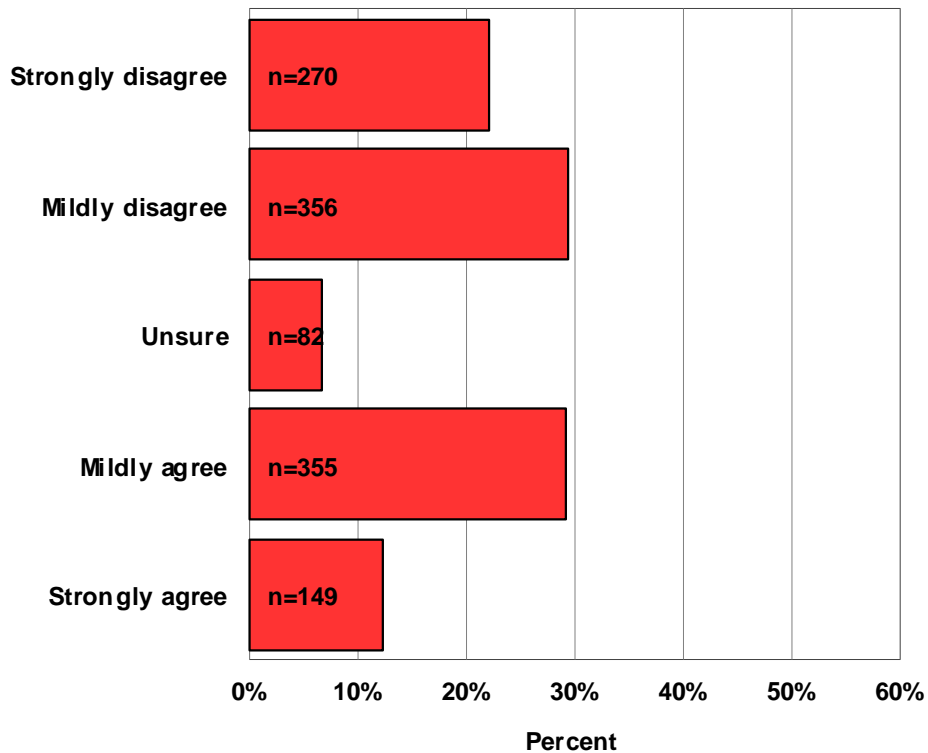


Mean	3.24
Standard deviation	1.33
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15b

Humans have the right to modify the natural environment to suit their needs.

(n = 1212)

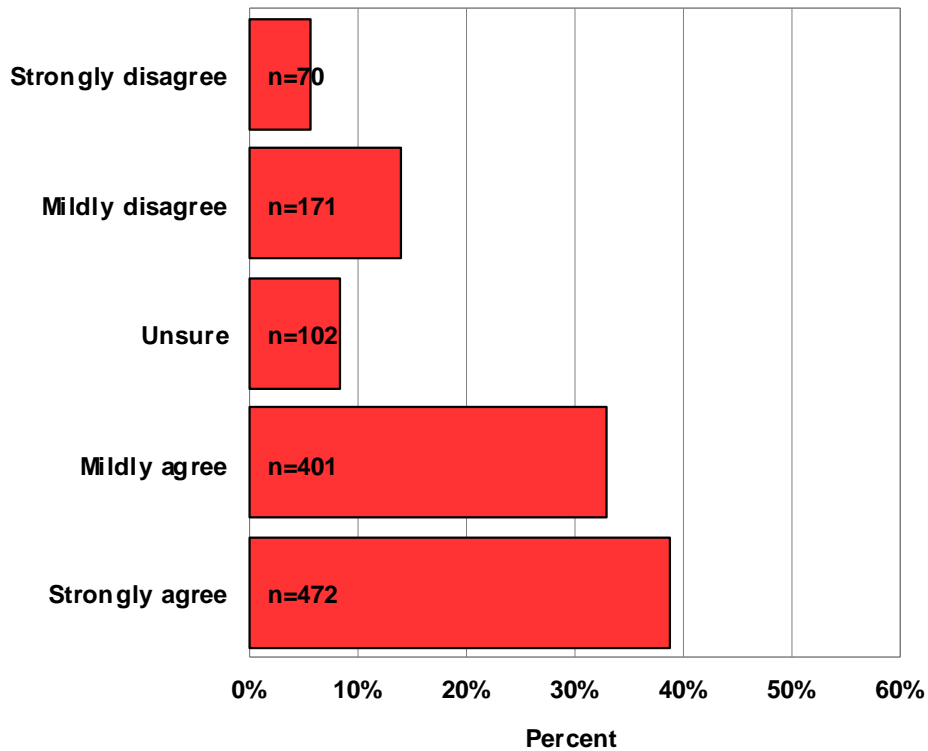


Mean	3.20
Standard deviation	1.39
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15c

When humans interfere with nature it often produces disastrous consequences.

(n = 1216)

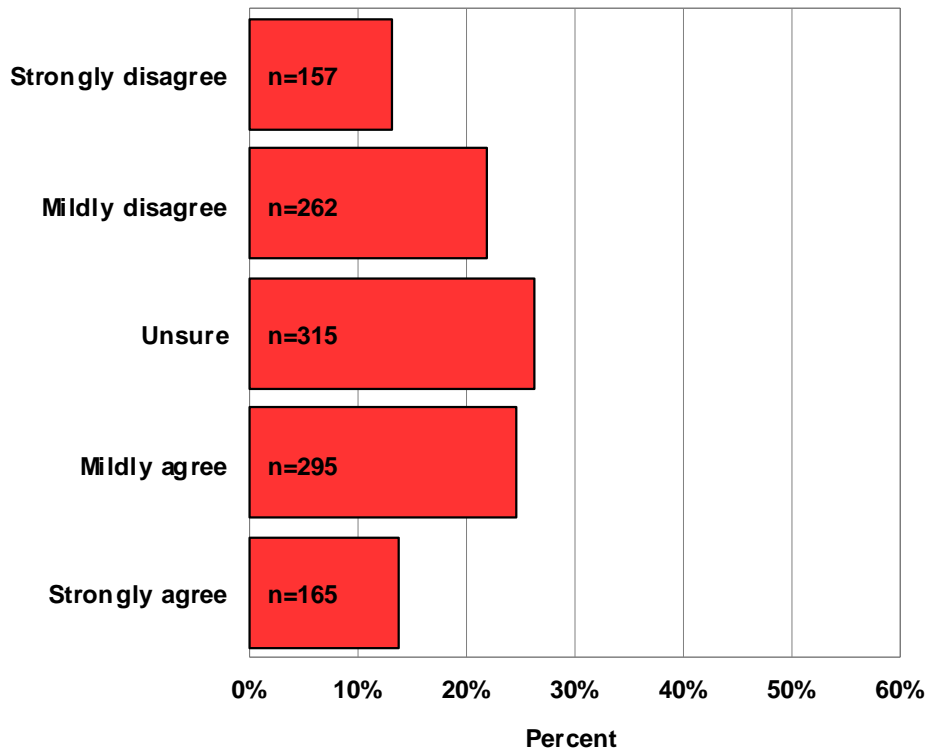


Mean	3.85
Standard deviation	1.24
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15d

Human ingenuity will ensure that we do
NOT make the earth unlivable.

(n = 1194)



Mean 2.96

Standard deviation 1.24

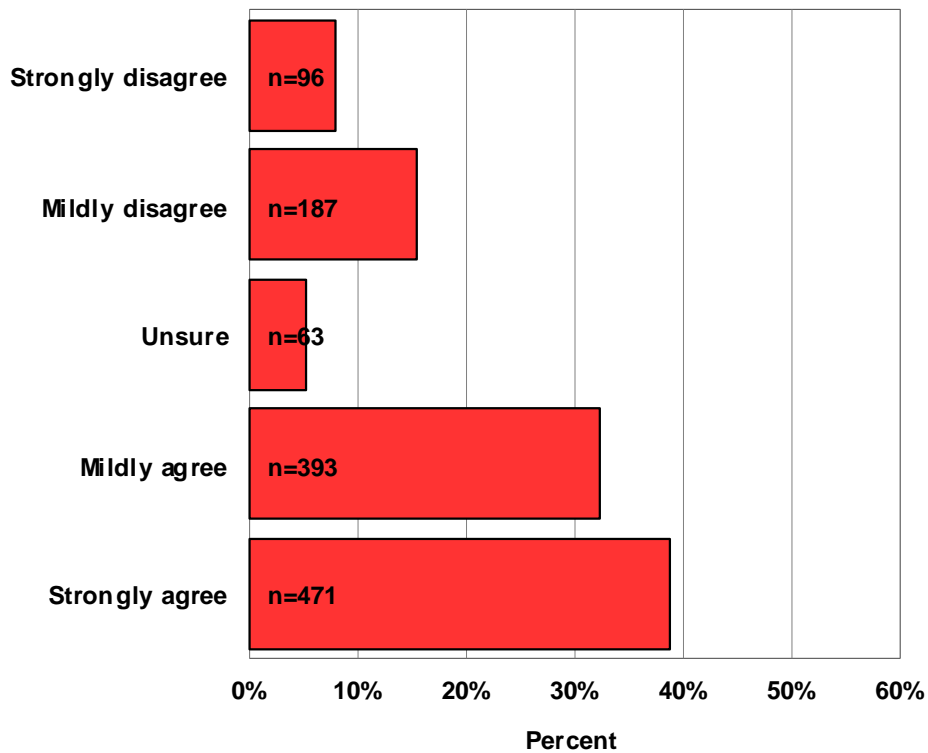
coding:

1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree

Figure 15e

Humans are severely abusing the environment.

(n = 1210)

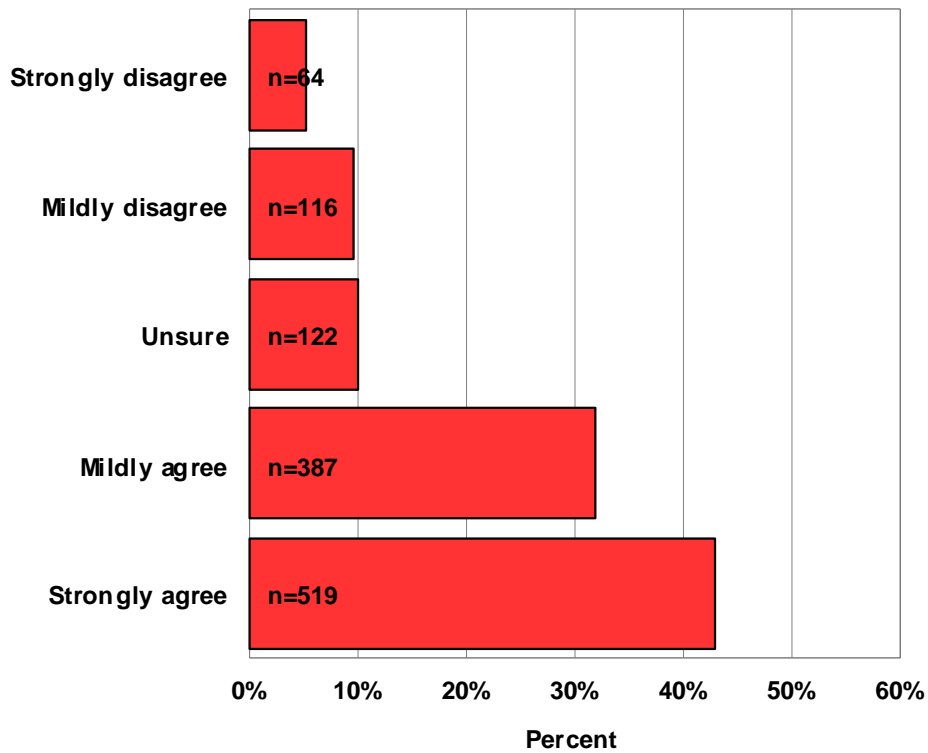


Mean	3.79
Standard deviation	1.32
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15f

The earth has plenty of natural resources if we just learn how to develop them.

(n = 1208)

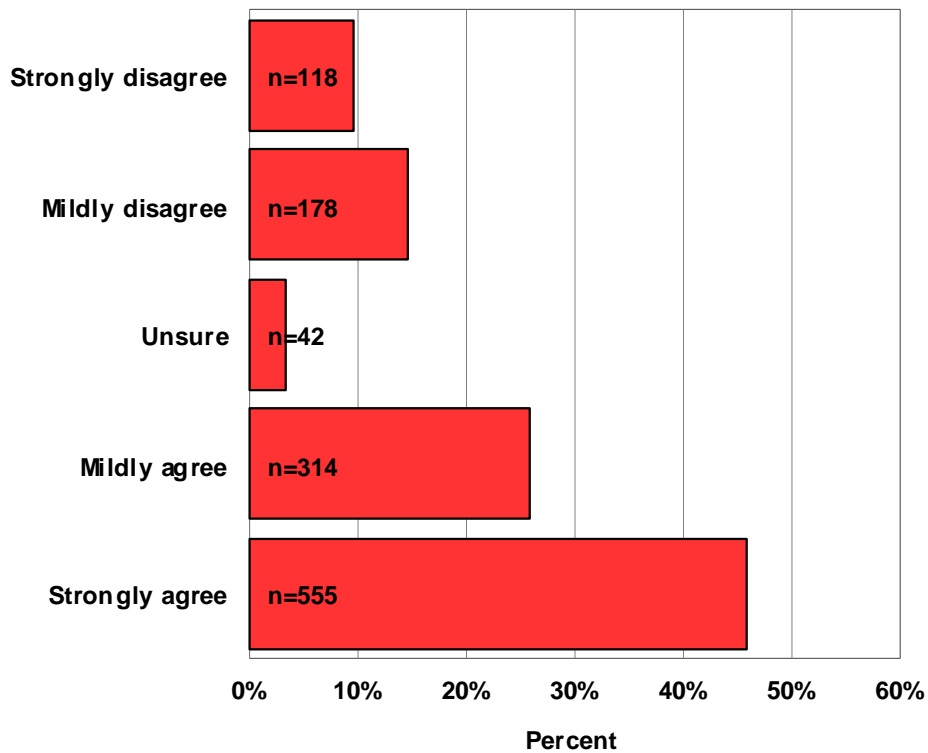


Mean	2.02
Standard deviation	1.18
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15g

Plants and animals have as much right as humans to exist.

(n = 1207)

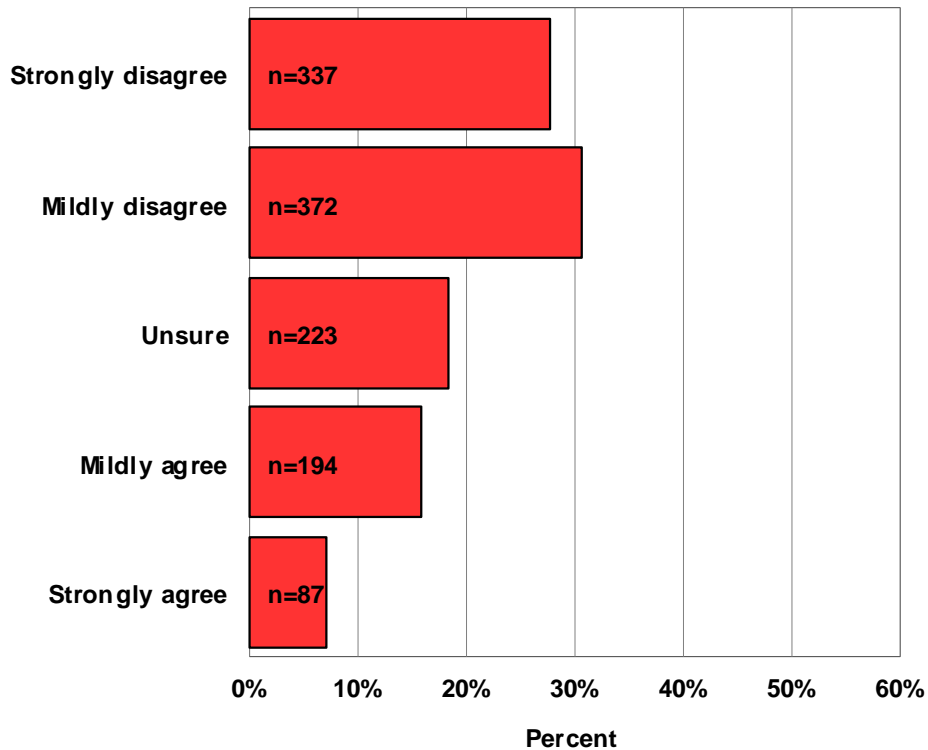


Mean	3.84
Standard deviation	1.39
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15h

The balance of nature is strong enough to cope with the impacts of modern industrial nations.

(n = 1213)

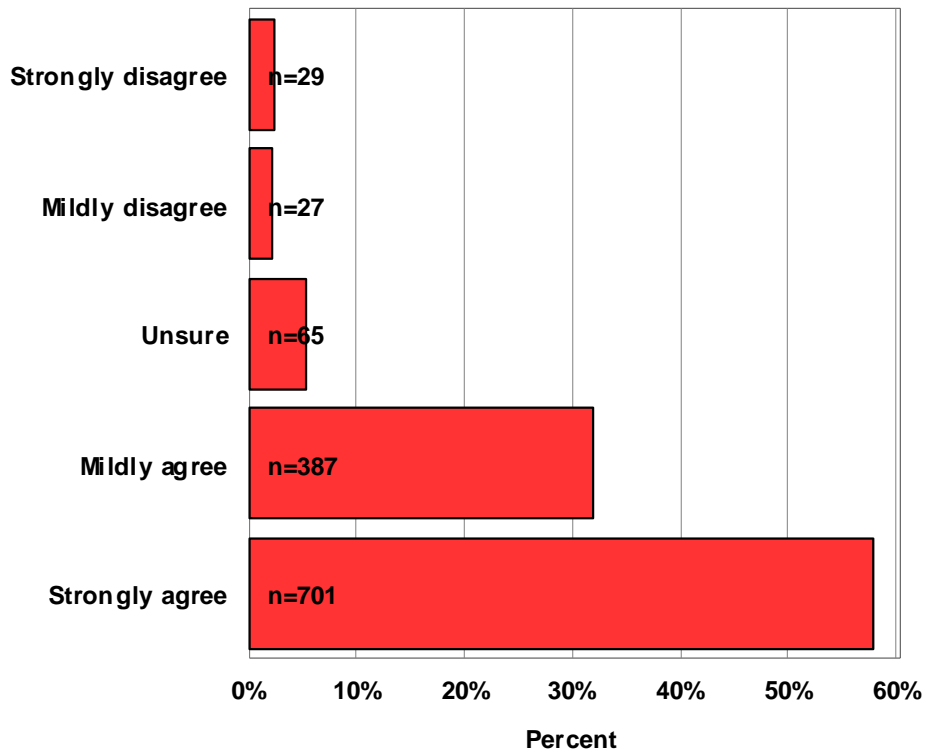


Mean	3.56
Standard deviation	1.25
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15i

Despite our special abilities humans are still
subject to the laws of nature.

(n = 1209)

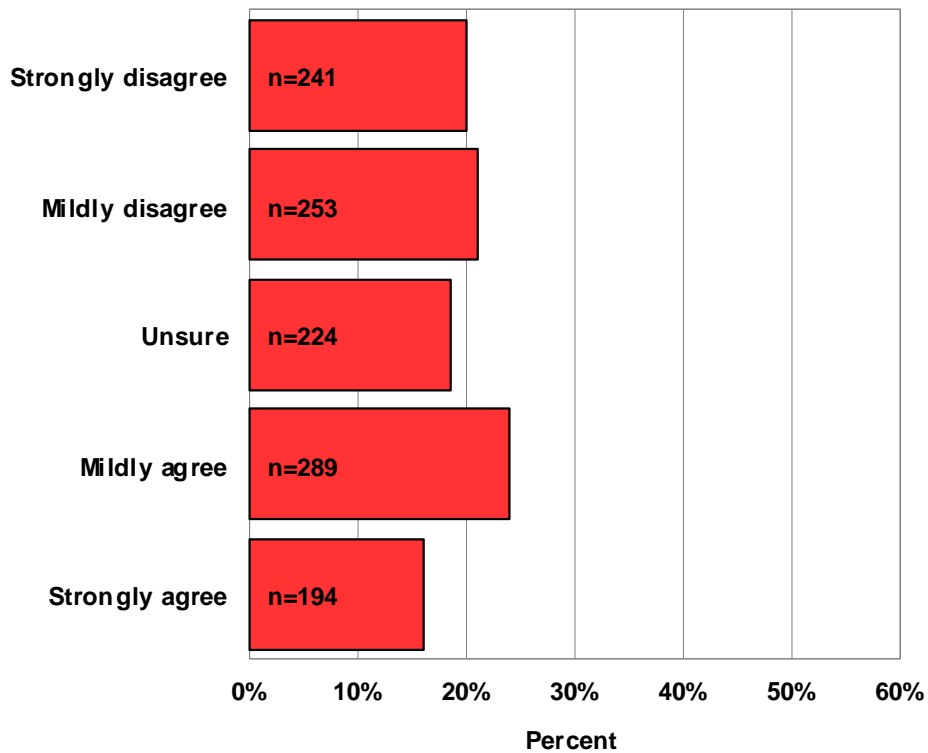


Mean	4.41
Standard deviation	0.88
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15j

The so-called “ecological crisis” facing humankind has been greatly exaggerated.

(n = 1201)

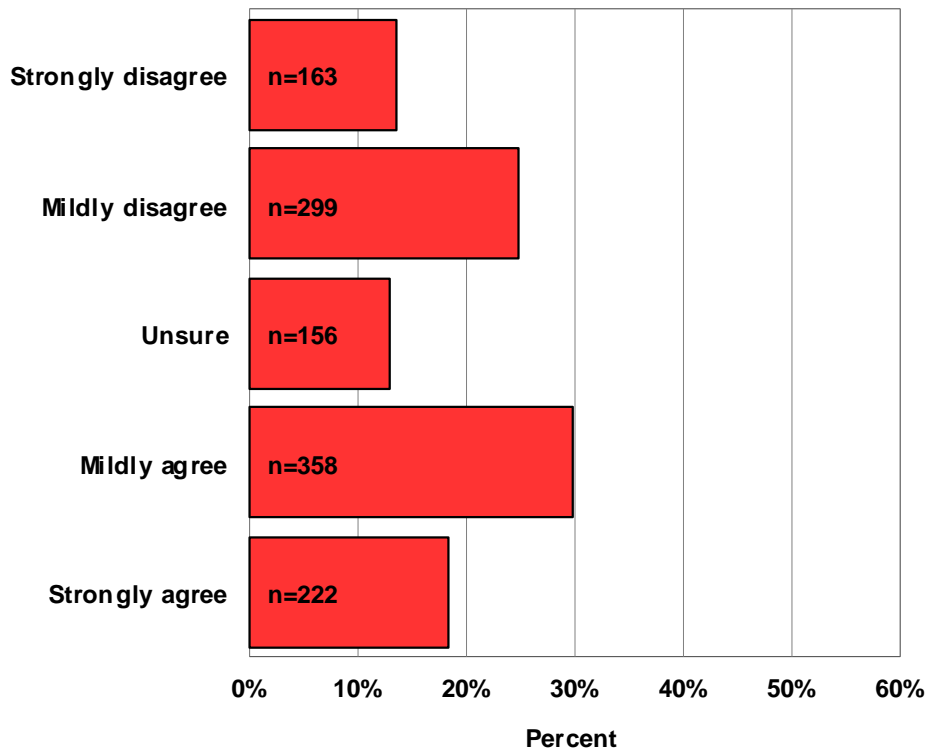


Mean	3.05
Standard deviation	1.38
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15k

The earth is like a spaceship with very limited room and resources.

(n = 1198)

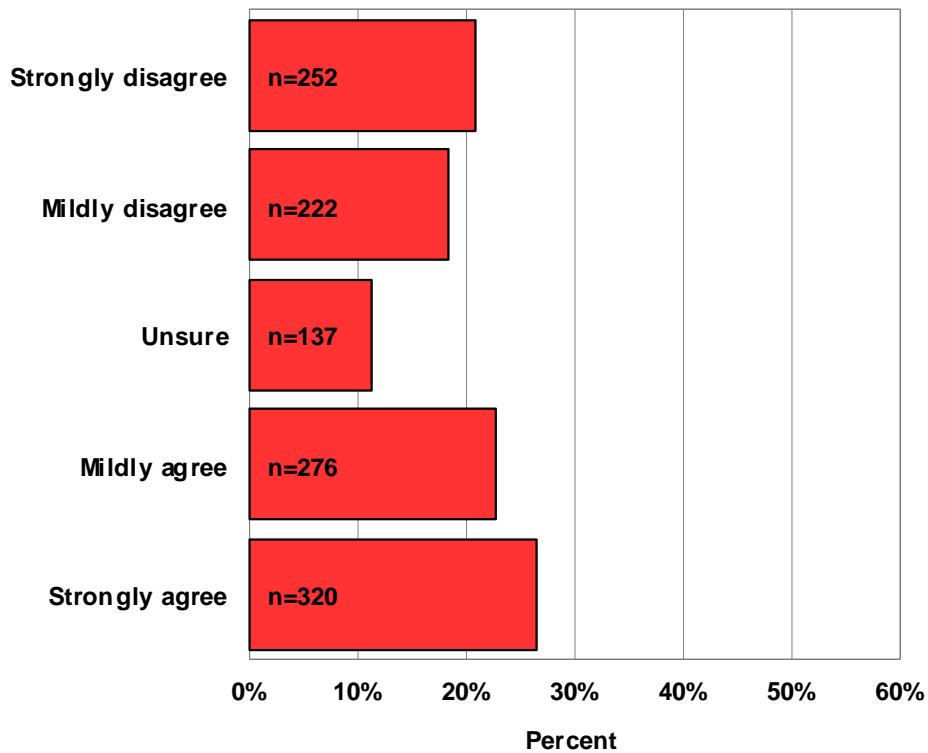


Mean	3.15
Standard deviation	1.35
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15I

Humans were meant to rule
over the rest of nature.

(n = 1207)

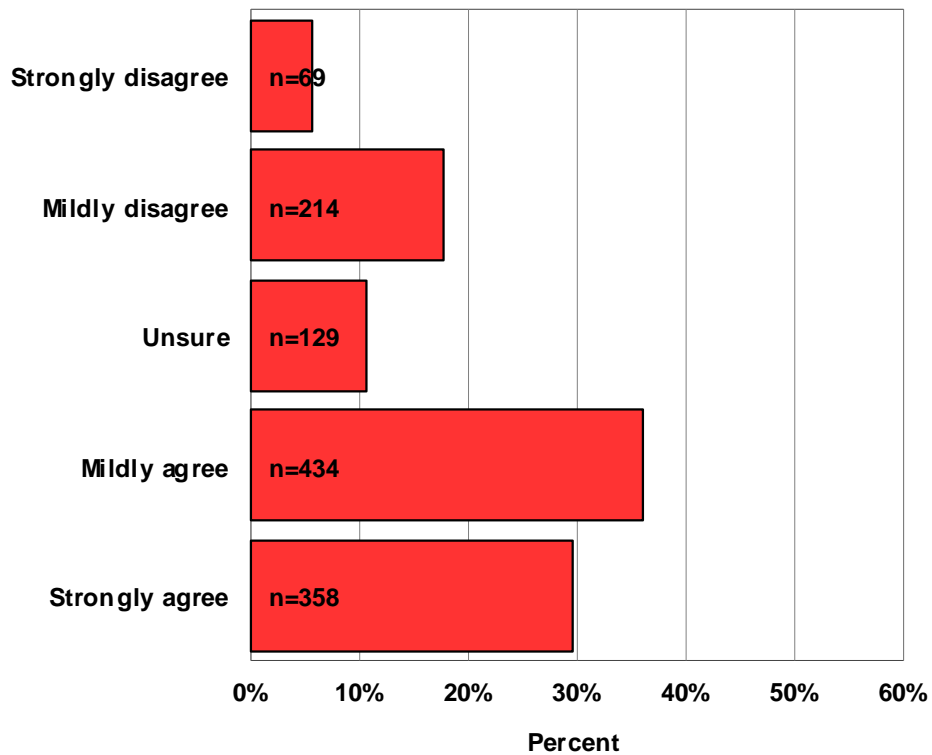


Mean	2.84
Standard deviation	1.51
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15m

The balance of nature is very delicate and easily upset.

(n = 1204)

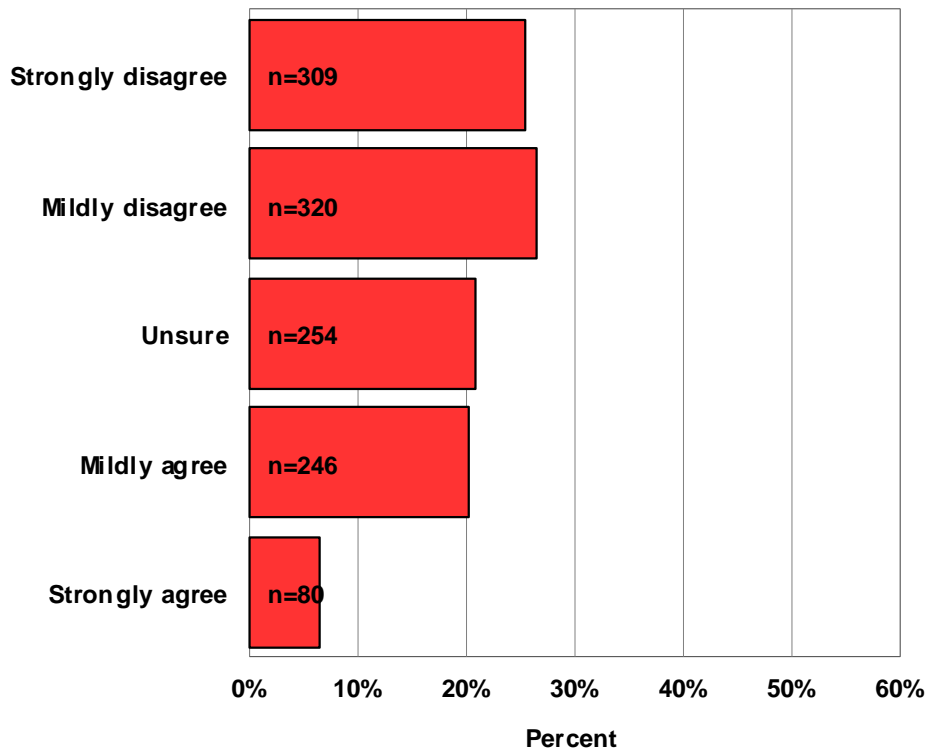


Mean	3.66
Standard deviation	1.23
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 15n

Humans will eventually learn enough about how nature works to be able to control it.

(n = 1209)

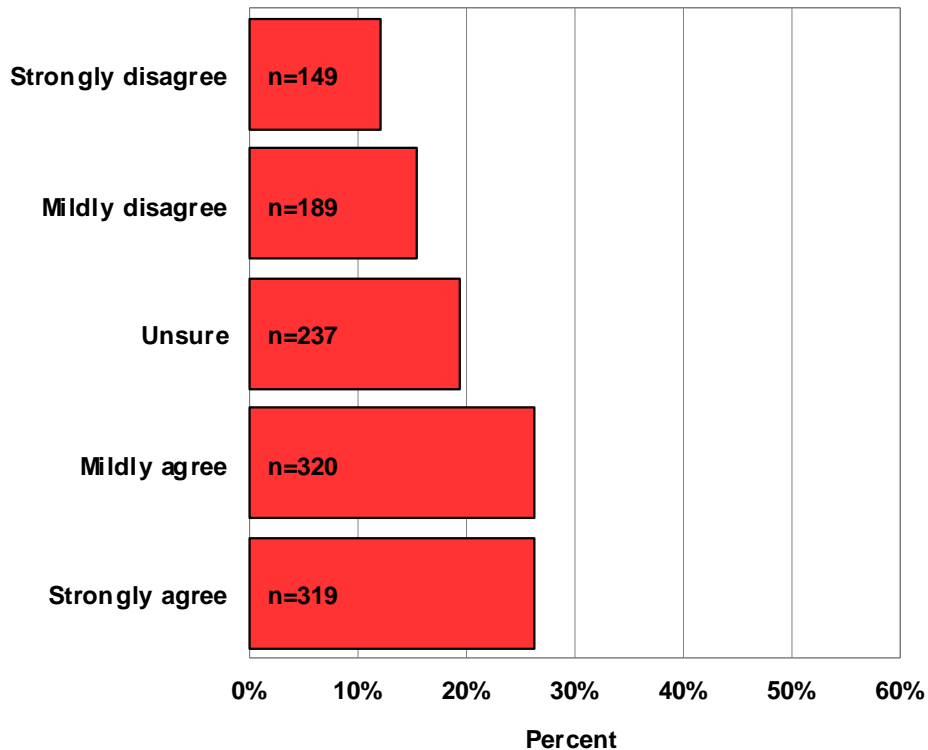


Mean	3.44
Standard deviation	1.25
coding: 1 = strongly agree; 2 = mildly agree; 3 = unsure; 4 = mildly disagree; 5 = strongly disagree	

Figure 15o

If things continue on their present course, we will soon experience a major ecological catastrophe.

(n = 1214)



Mean	3.39
Standard deviation	1.35
coding: 1 = strongly disagree; 2 = mildly disagree; 3 = unsure; 4 = mildly agree; 5 = strongly agree	

Figure 16

Position on environmental issues

(n = 1095)

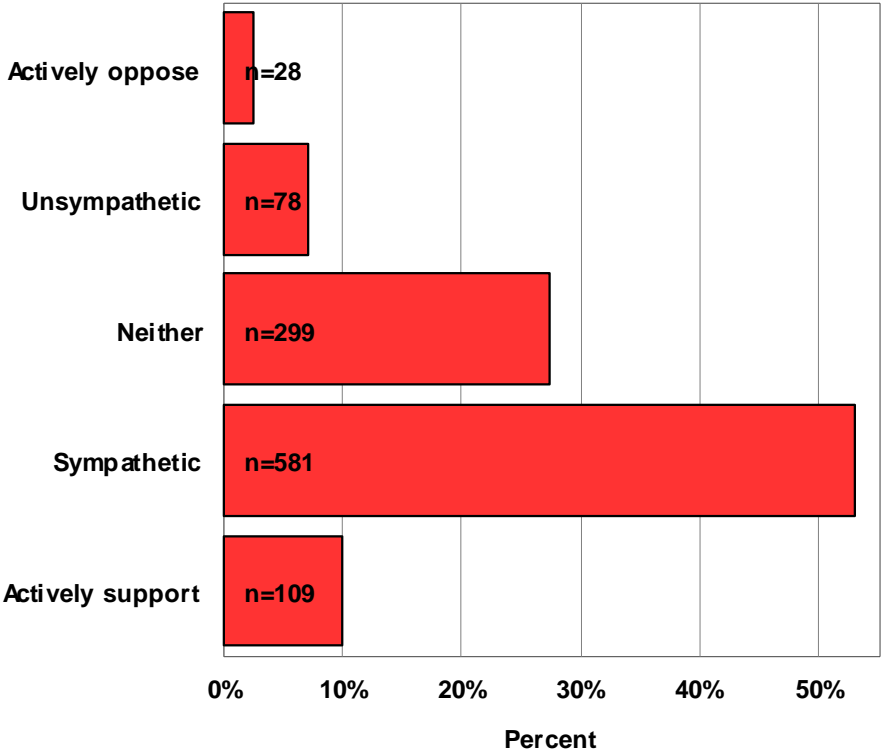


Figure 17

Membership in any environmental and/or wildlife conservation groups

(n = 1209)

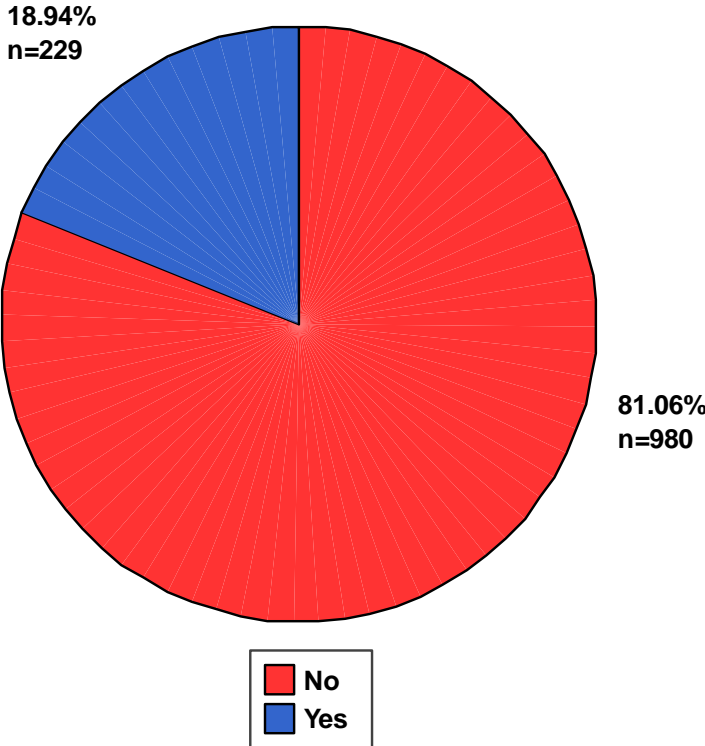


Figure 18

Number of environmental and/or wildlife conservation groups to which respondents belong
(n = 207)

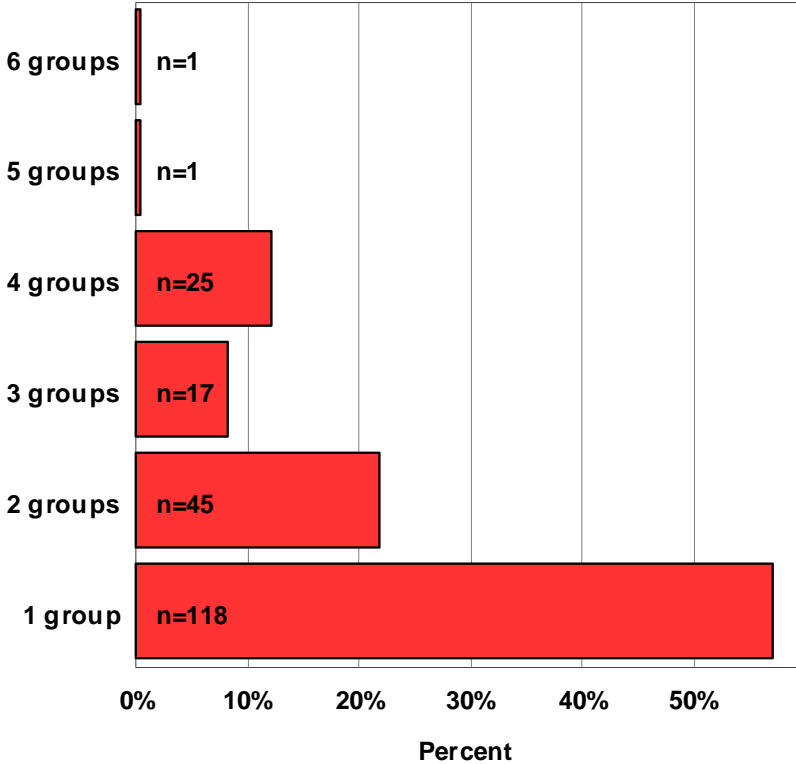


Table 2

Top six environmental and/or wildlife conservation groups to which respondents belong

Top six groups:	n
Ducks Unlimited	28
Nature Conservancy	19
Sierra Club	17
Coastal Conservation Association	16
World Wildlife Federation	14
National Wildlife Federation	10

Figure 19

Donated money to any environmental and/or wildlife conservation groups in the past five years
(n = 227)

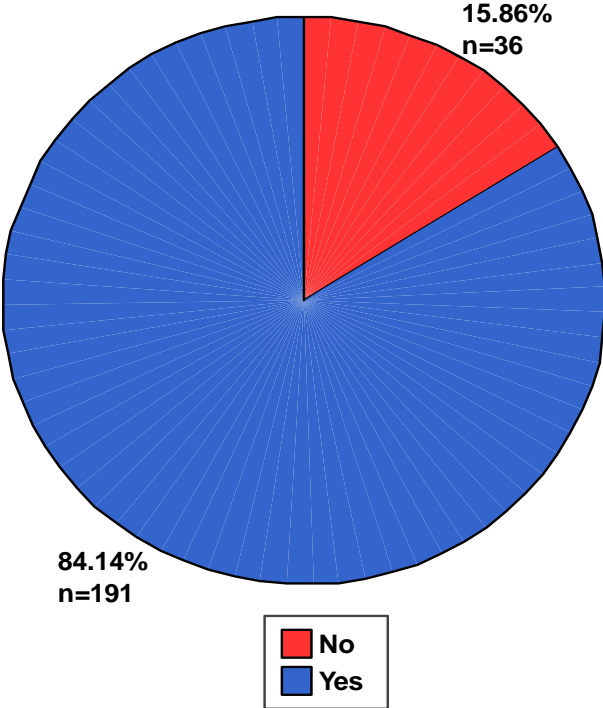


Figure 20

Volunteered any time to environmental and/or wildlife conservation groups in the past five years
(n = 226)

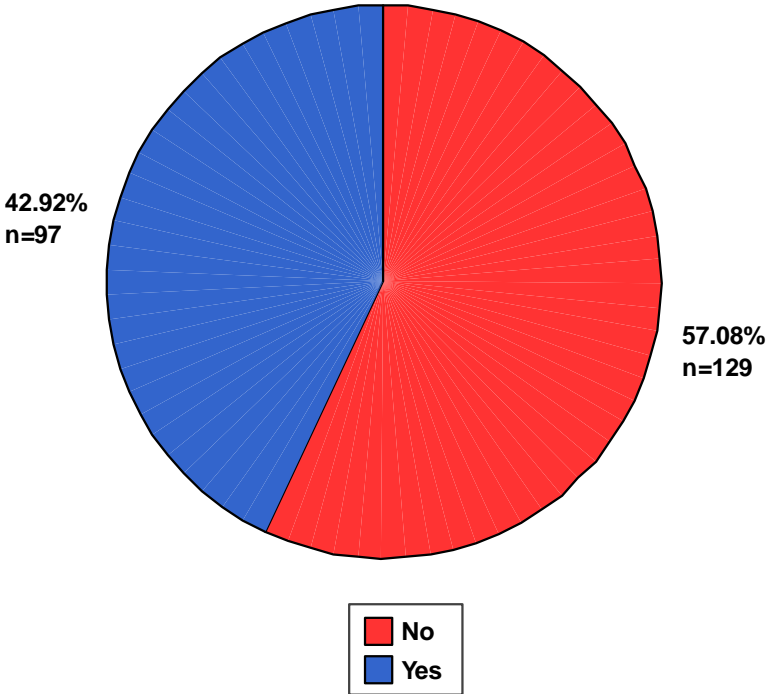
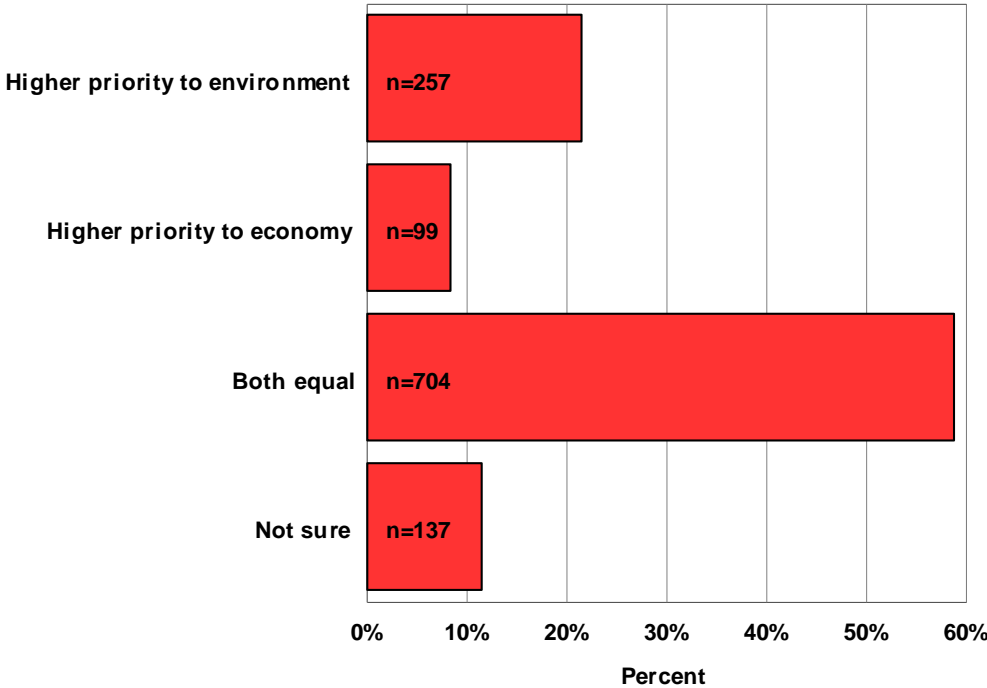


Figure 21

Opinion on the tradeoffs between the environment and the economy

(n = 1197)



Section III

Energy Issues

Figures 22 through 37n and Tables 3 through 6 summarize respondents' opinions and/or behaviors on energy-related issues in the United States. Topics include respondents' views on:

- the seriousness of the current energy situation in the United States (Figure 22);
- the likelihood that the United States will face a critical energy shortage in the next five years (Figure 23 and Table 3);
- numerous ways that the United States might reduce its reliance on foreign oil (Figures 24a through 24o and Table 4);
- the debate surrounding exploration and production of oil and natural gas in environmentally sensitive offshore areas and onshore lands (Figure 25);
- opening up the Alaska Arctic National Wildlife Refuge for energy exploration and production (Figures 26 and 27);
- energy-related issues in ecologically sensitive areas, such as coastal wetlands, hardwood forests, and desert ecosystems (Figures 28a through 31b);
- energy-related issues on both privately-owned and publicly-owned lands (Figures 32a through 35b);
- requiring the energy industry to adopt and use a more environmentally-friendly approach to oil and gas production (Figure 36 and Table 5); and
- the oil and gas industry in Texas (Figures 37a through 37n).

The section concludes with a list of eight actions that respondents may or may not have taken in response to the exploration and production of oil and natural gas on environmentally sensitive lands (Table 6).

Figure 22

Seriousness of the energy situation in the United States today

(n = 1118)

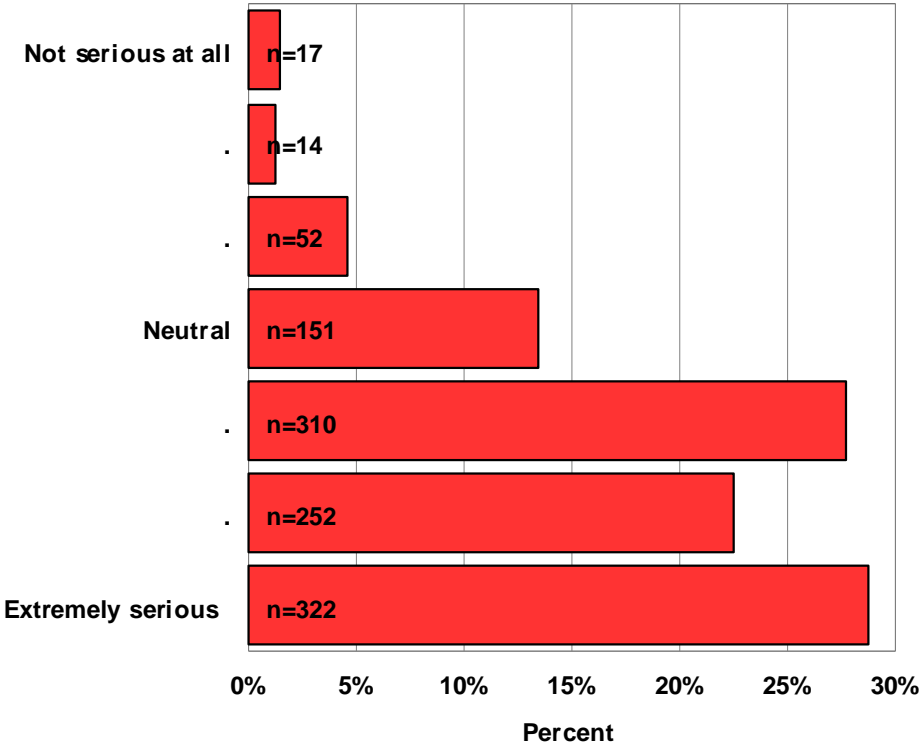


Figure 23

The United States will face a critical energy crisis in the next five years

(n = 1174)

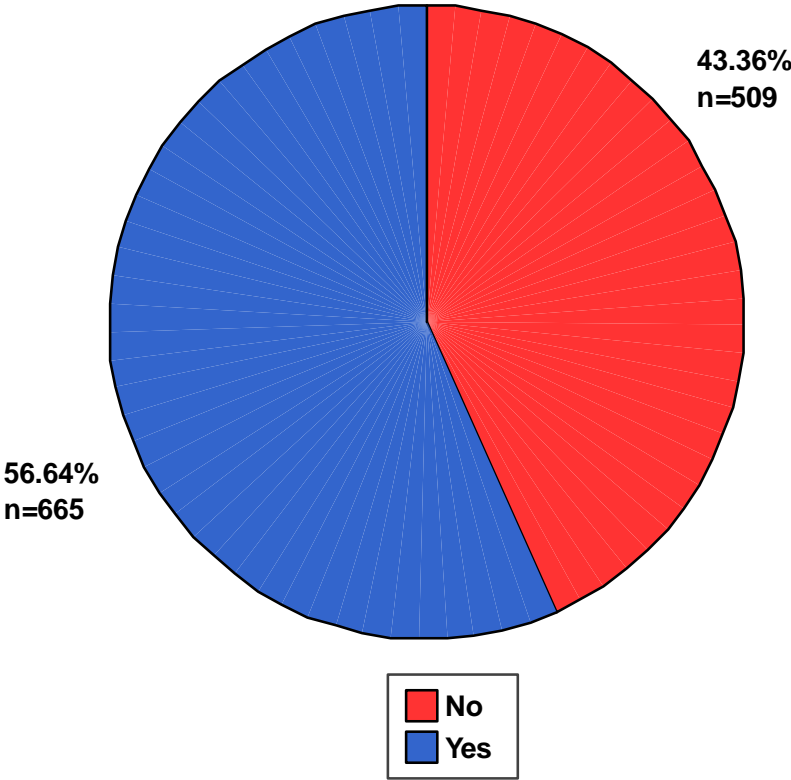


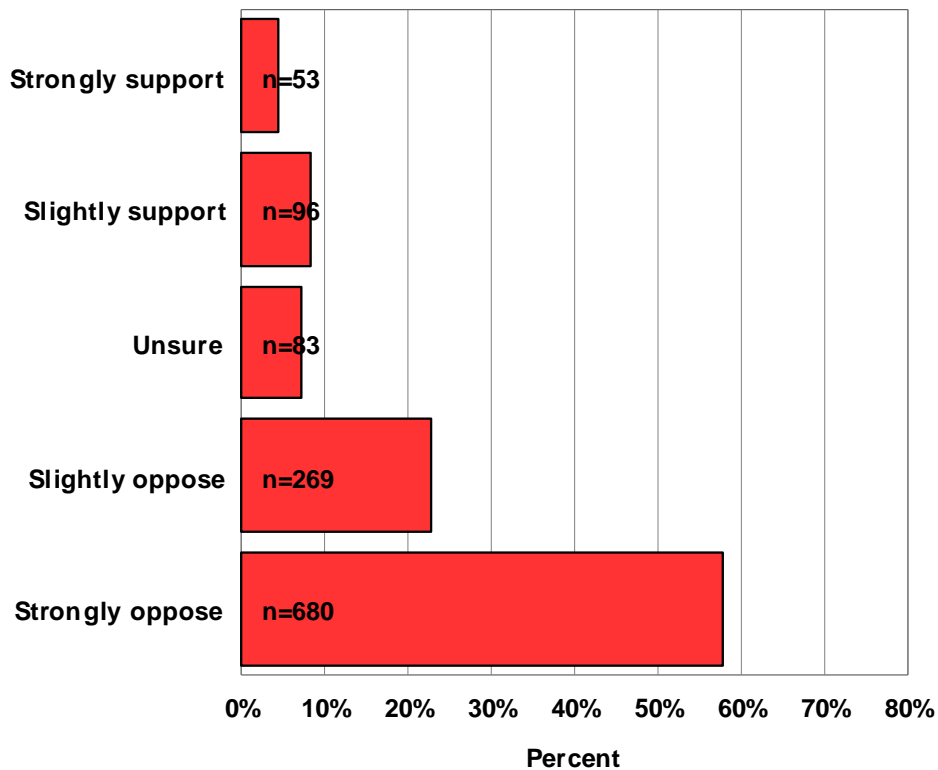
Table 3

Top five proposed reasons why the United States will face a critical energy shortage in the next five years

Top five reasons:	n	Percent
Excessive lifestyles	122	19.9%
Dependence on fossil fuels	88	14.4%
Foreign countries	65	10.6%
Increasing worldwide demand	50	8.2%
Corporate greed	33	5.4%

Figure 24a

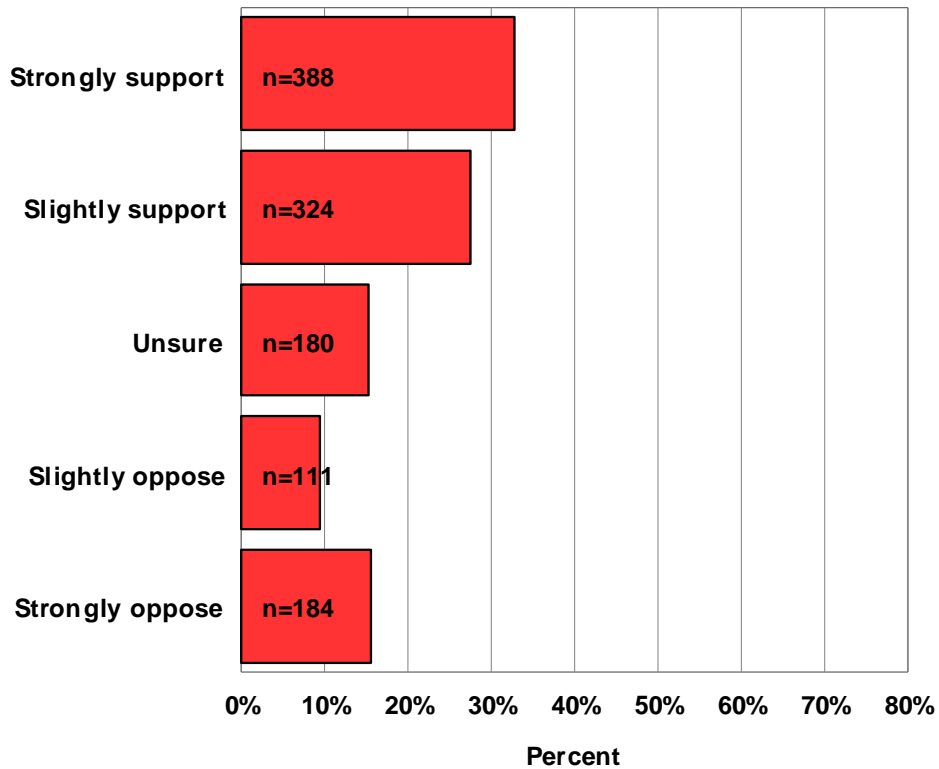
Ways to reduce reliance on foreign oil:
Increase the gasoline tax
(n = 1181)



Mean	1.79
Standard deviation	1.15
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24b

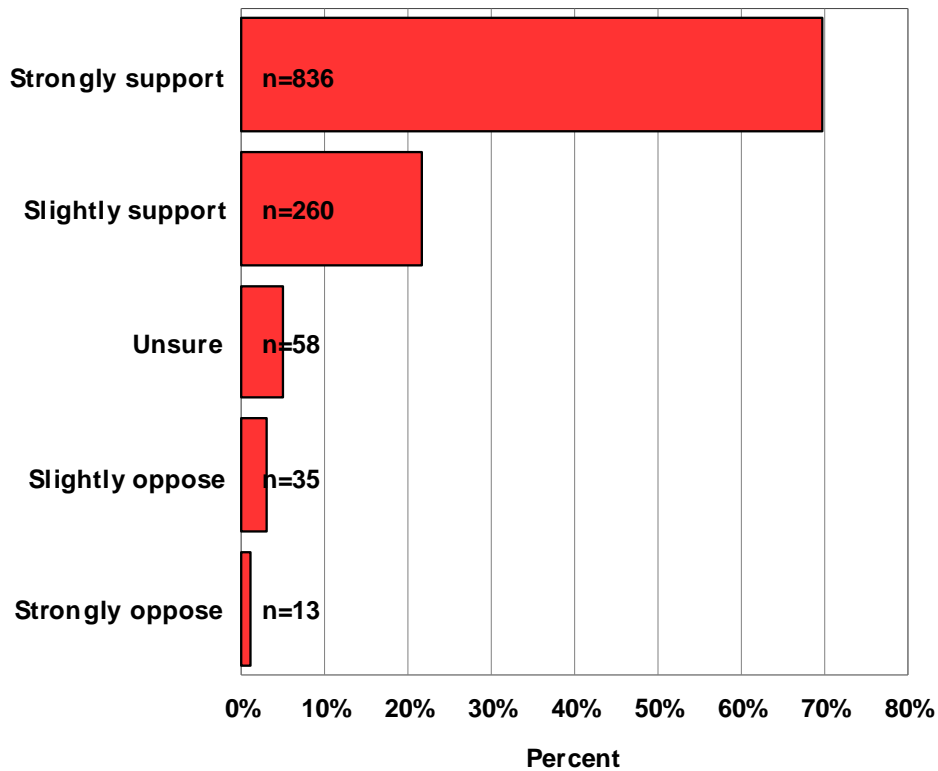
Ways to reduce reliance on foreign oil:
Permit more nuclear power plants to be built
(n = 1181)



Mean	3.52
Standard deviation	1.42
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24c

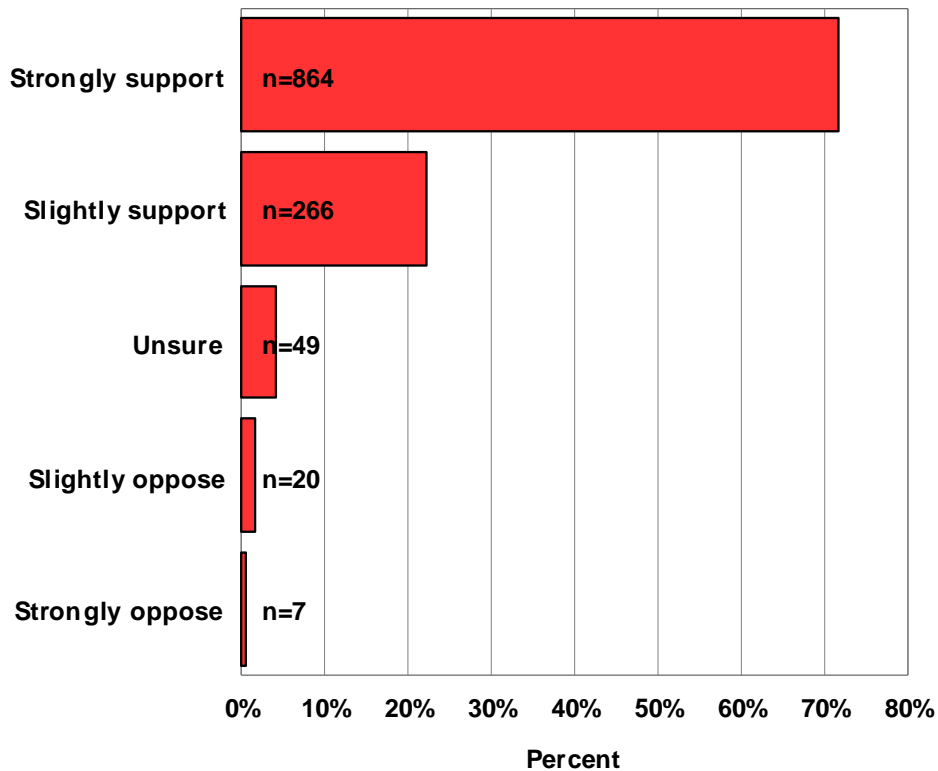
Ways to reduce reliance on foreign oil:
Invest in research and development of
wind power energy sources
(n = 1202)



Mean	4.56
Standard deviation	0.81
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24d

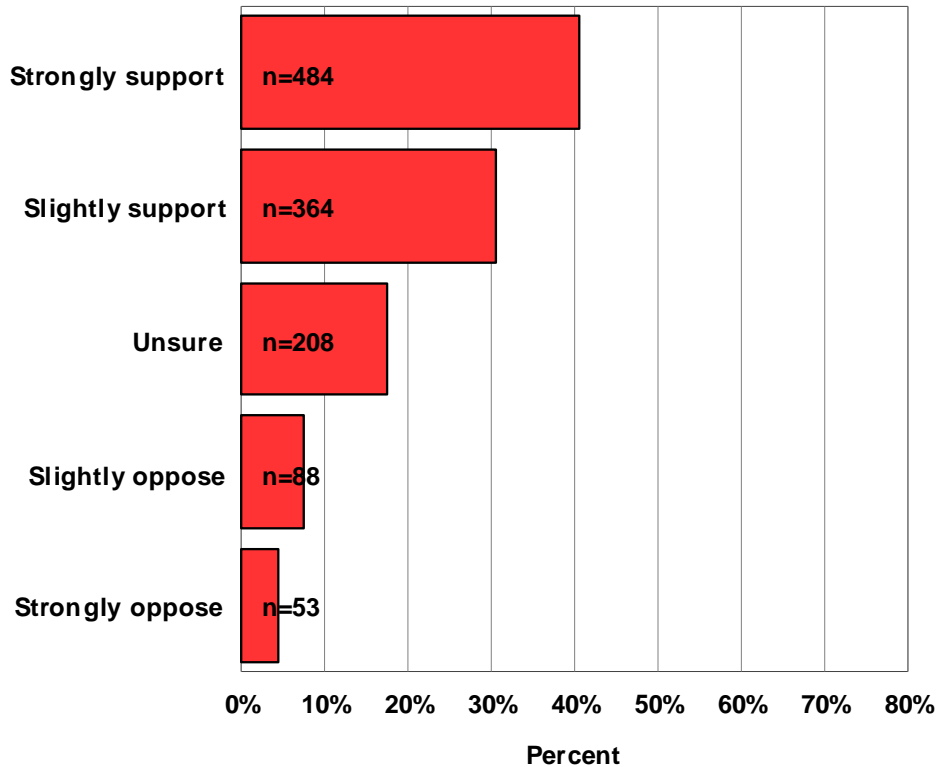
Ways to reduce reliance on foreign oil:
Invest in research and development of
solar power energy sources
(n = 1206)



Mean	4.63
Standard deviation	0.70
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24e

Ways to reduce reliance on foreign oil:
Build more cleaner-burning coal-fired
power plants
(n = 1197)

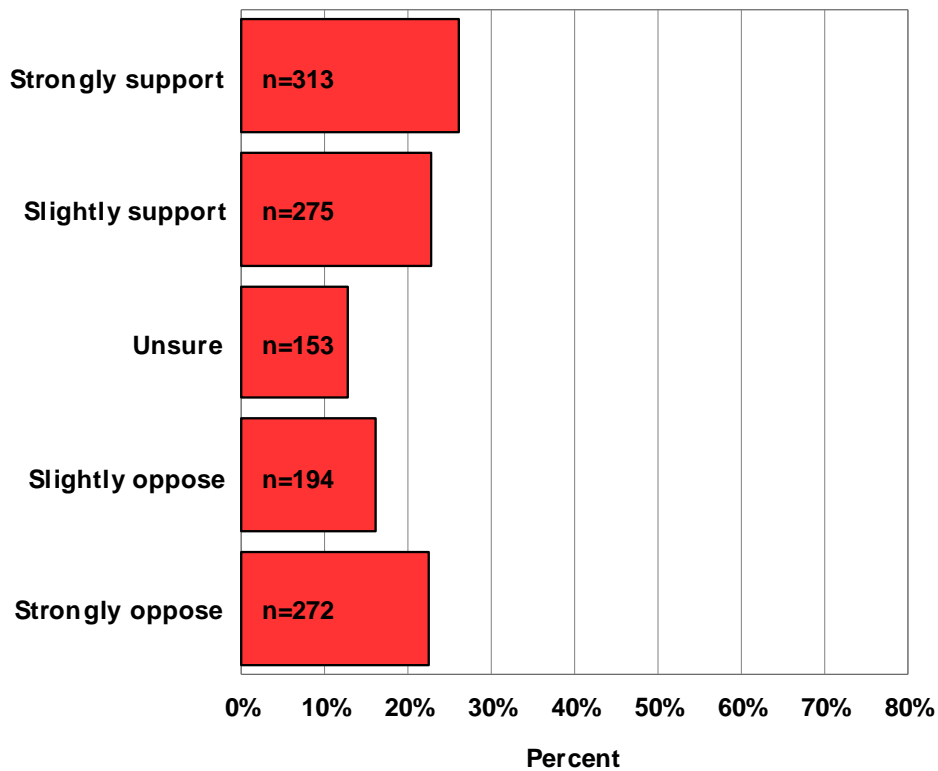


Mean	3.95
Standard deviation	1.13
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24f

Ways to reduce reliance on foreign oil:
Relax environmental standards for the drilling of oil and gas on environmentally sensitive lands

(n = 1207)

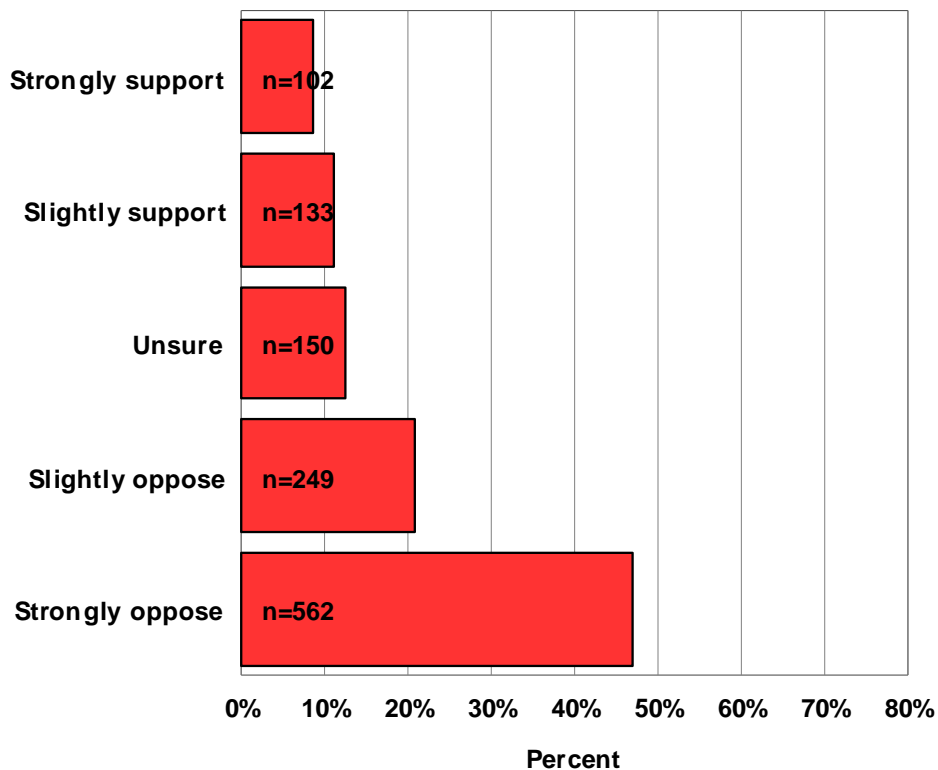


Mean	3.14
Standard deviation	1.52
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24g

Ways to reduce reliance on foreign oil:
Eliminate environmental standards for the
drilling of oil and gas on environmentally
sensitive lands

(n = 1196)

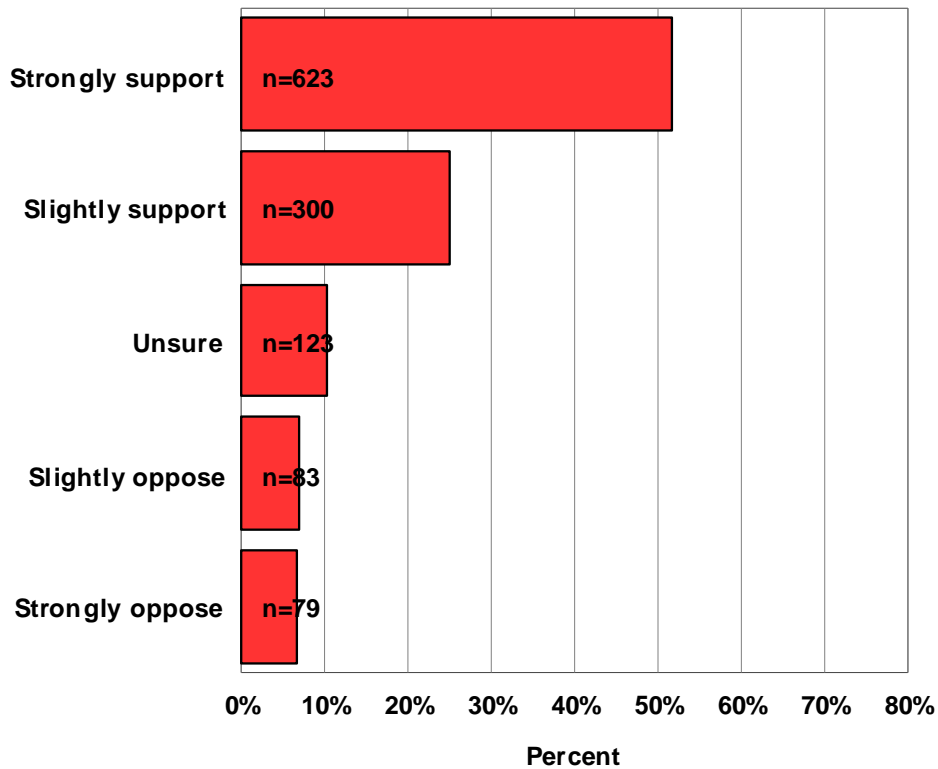


Mean	2.13
Standard deviation	1.34
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24h

Ways to reduce reliance on foreign oil: Impose stricter fuel mileage standards in cars and trucks

(n = 1208)

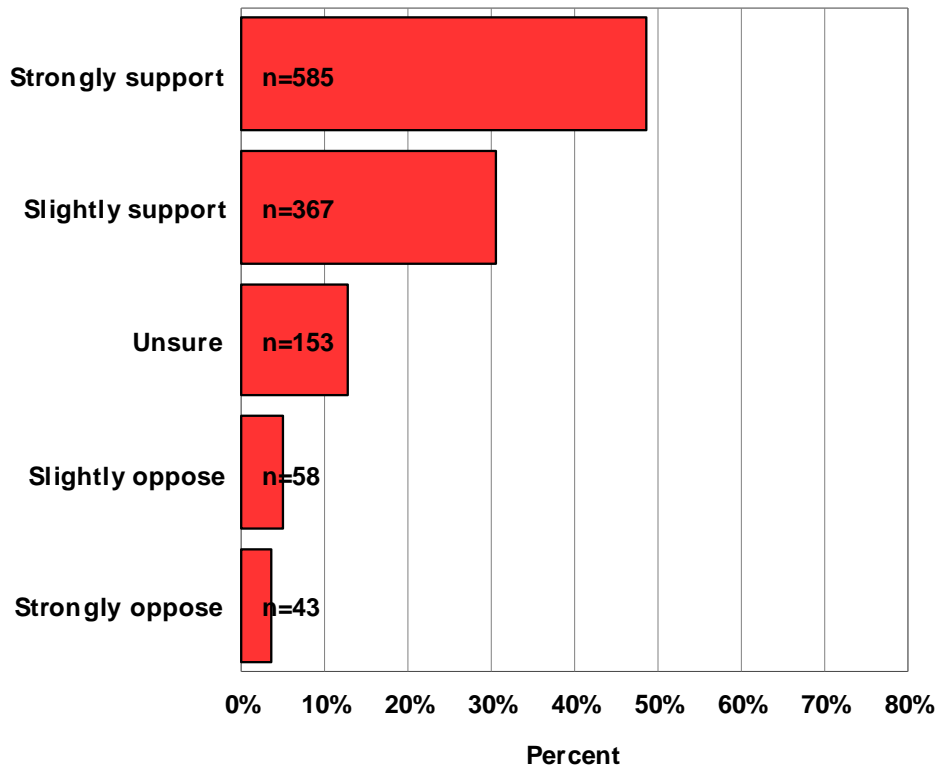


Mean	4.08
Standard deviation	1.22
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24i

Ways to reduce reliance on foreign oil:
Invest in research and development
of biofuels

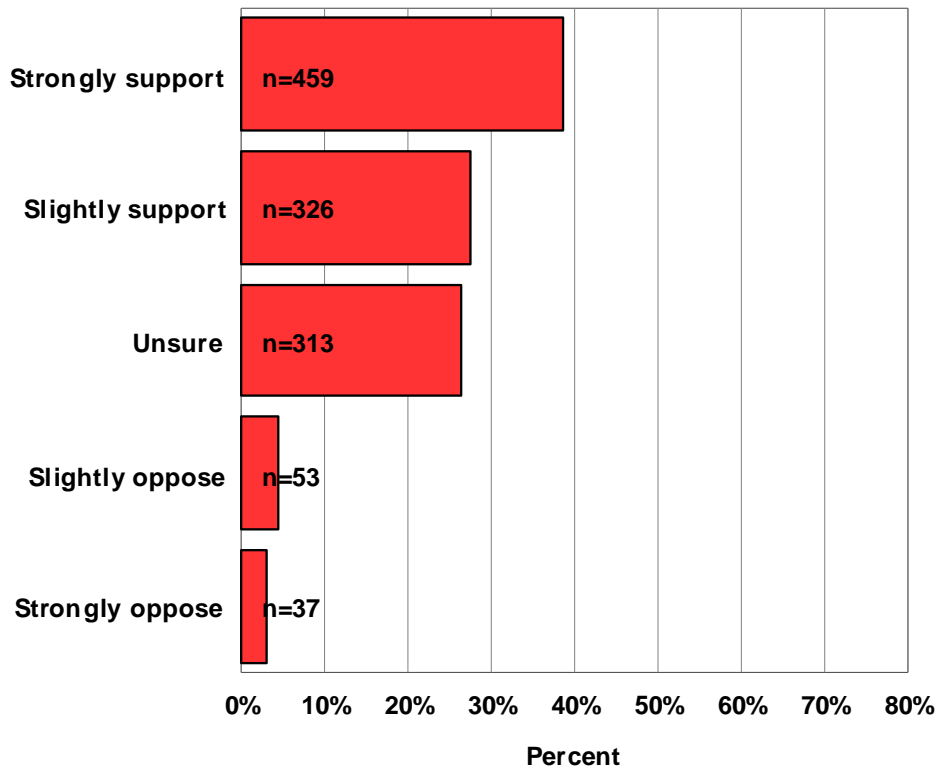
(n = 1206)



Mean	4.16
Standard deviation	1.05
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24j

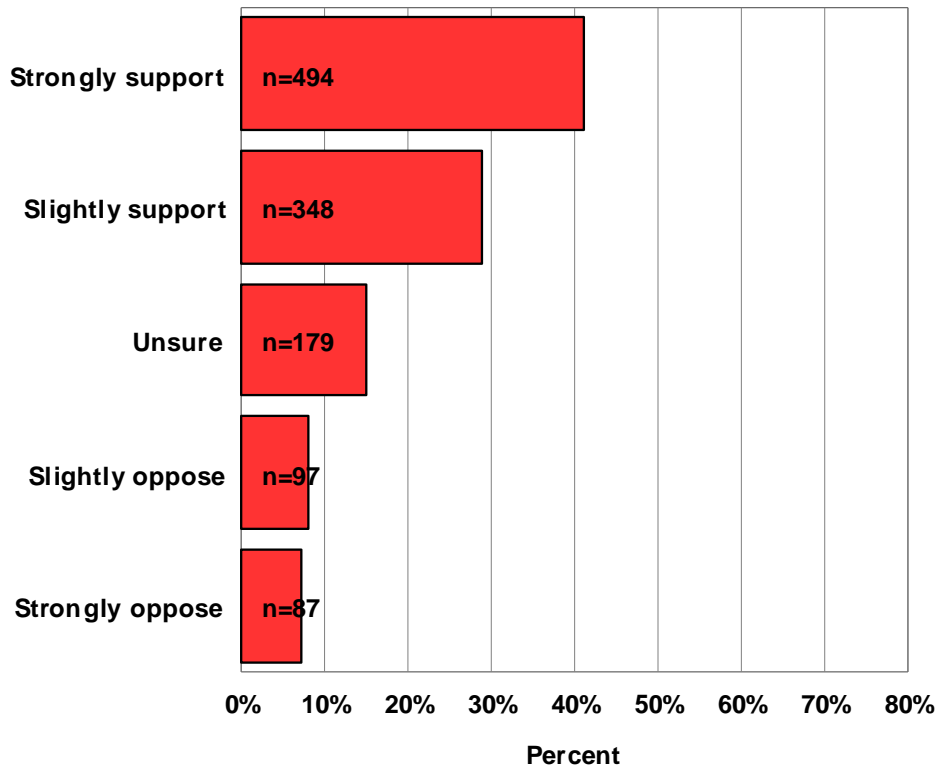
Ways to reduce reliance on foreign oil:
Encourage smart growth
(as opposed to suburban sprawl)
(n = 1188)



Mean	3.94
Standard deviation	1.05
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24k

Ways to reduce reliance on foreign oil:
Permit more oil refineries to be built
(n = 1205)

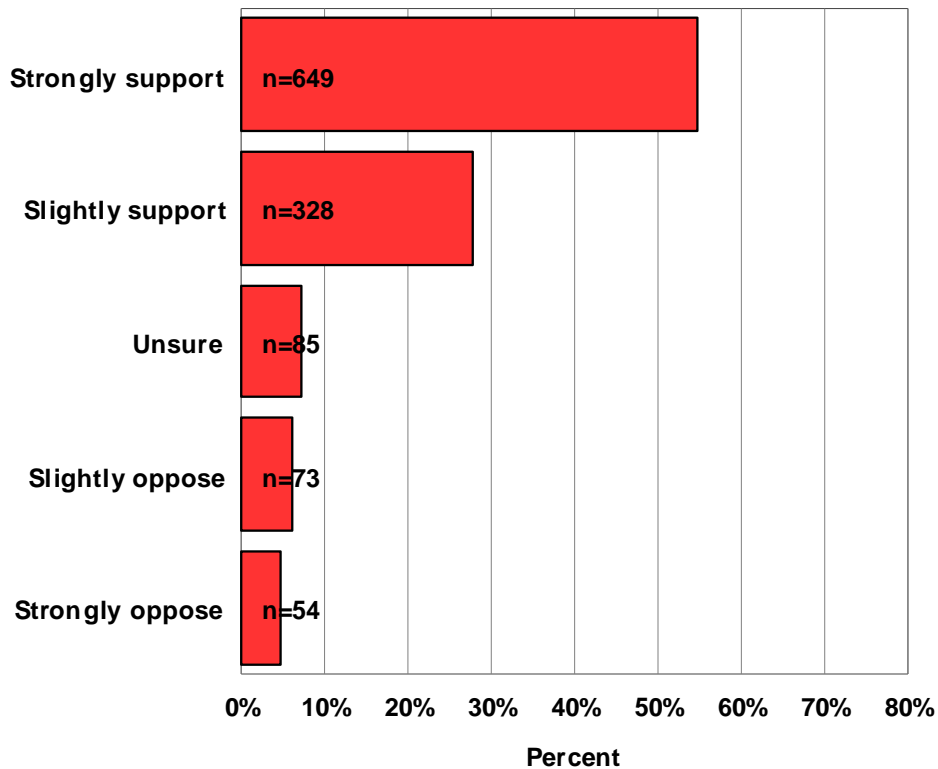


Mean	3.88
Standard deviation	1.23
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24I

Ways to reduce reliance on foreign oil:
Increase production of oil and gas
in the U.S.

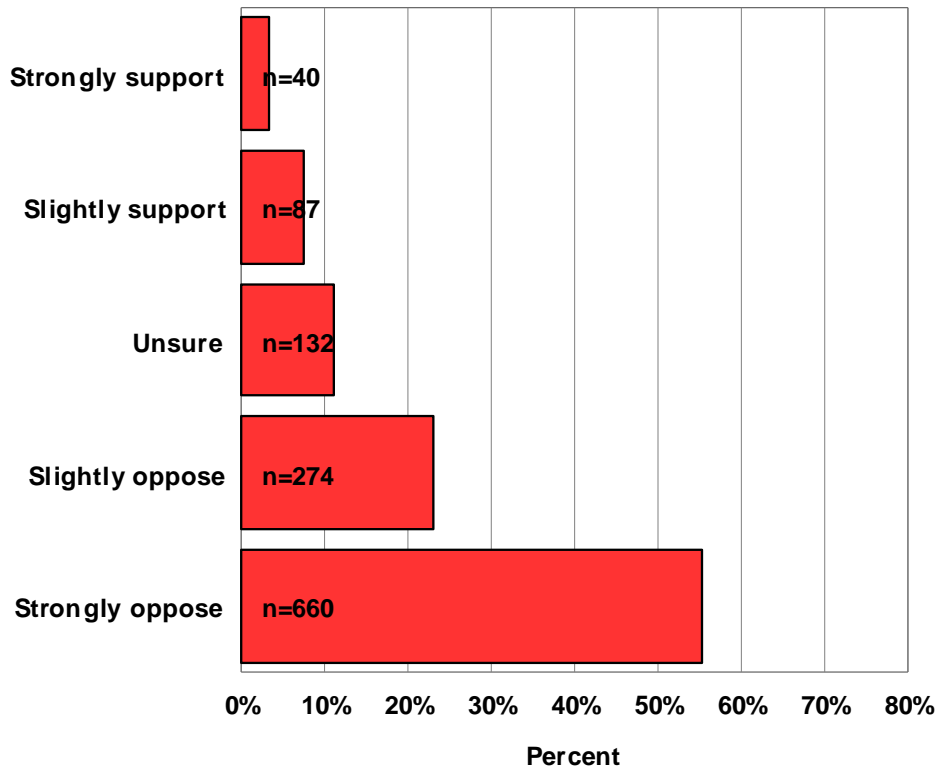
(n = 1189)



Mean	4.22
Standard deviation	1.11
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24m

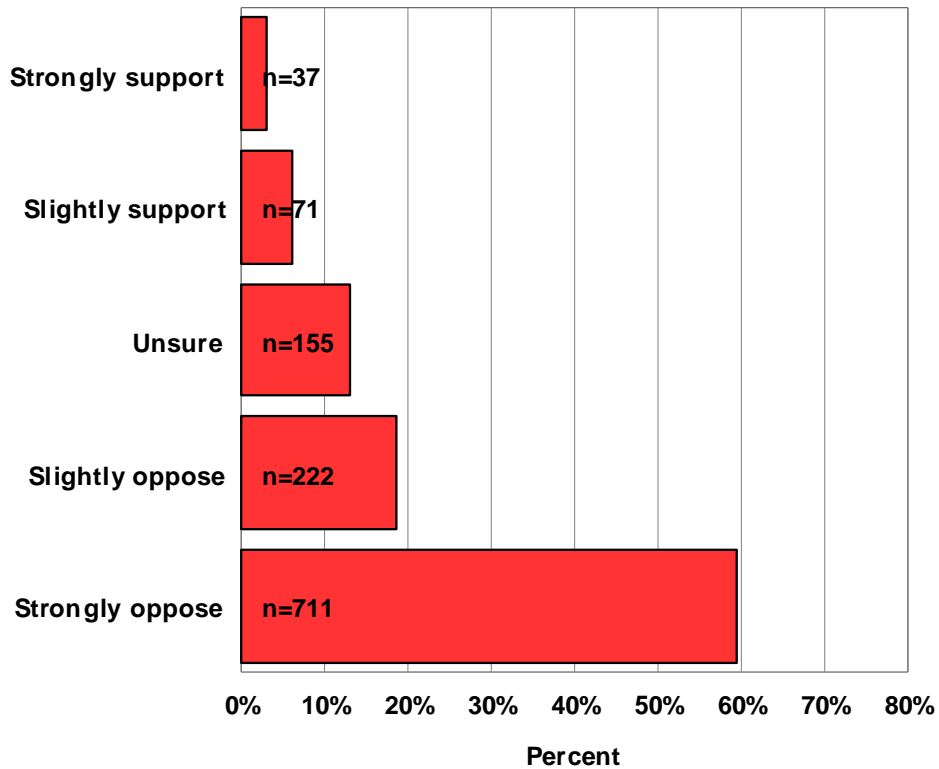
Ways to reduce reliance on foreign oil:
Raise price to reduce demand
(n = 1193)



Mean	1.80
Standard deviation	1.10
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24n

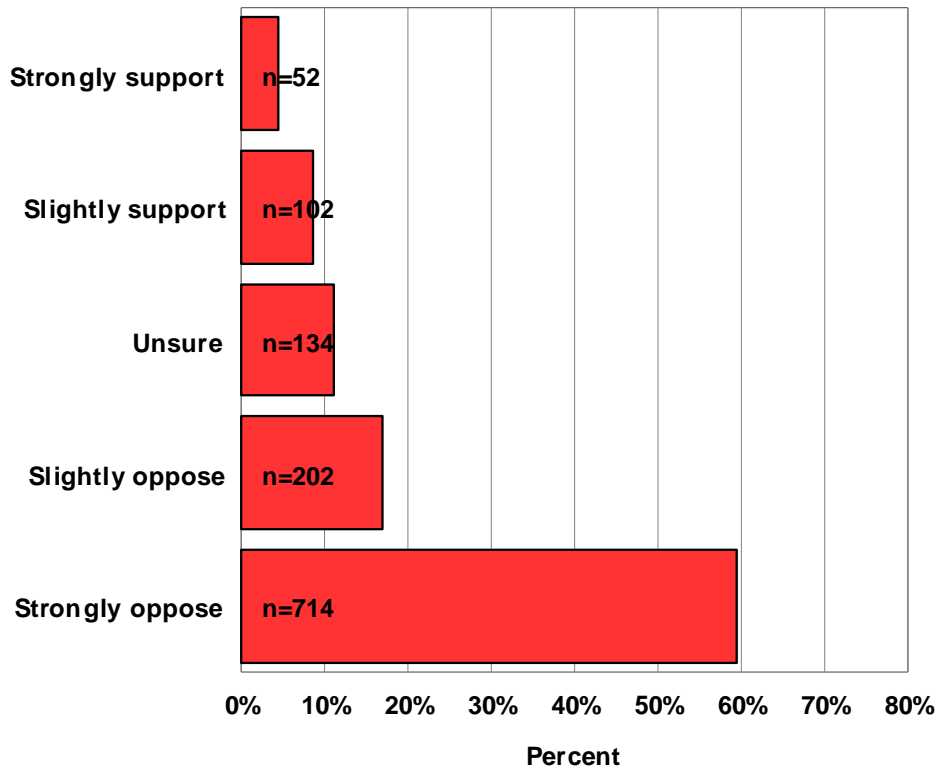
Ways to reduce reliance on foreign oil:
Close gas stations on certain days
(n = 1196)



Mean	1.75
Standard deviation	1.09
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Figure 24o

Ways to reduce reliance on foreign oil:
Impose driving restrictions
(n = 1204)



Mean	1.82
Standard deviation	1.18
coding: 1 = strongly oppose; 2 = slightly oppose; 3 = unsure; 4 = slightly support; 5 = strongly support	

Table 4

Top ten proposed most feasible ways to reduce reliance on foreign oil

Top ten ways:	n
Invest in research and development of <u>wind power</u> energy sources	194
Invest in research and development of <u>solar power</u> energy sources	162
Increase production of oil and gas in the U.S.	161
Impose stricter mileage standards in cars and trucks	132
Invest in research and developments of biofuels	111
<u>Relax</u> environmental standards for the drilling of oil and gas on environmentally sensitive lands	109
Permit more nuclear power plants to be built	105
Permit more oil refineries to be built	87
Build more cleaner-burning coal-fired power plants	58
Increase the gasoline tax	27

Figure 25

Familiarity with the debate surrounding the exploration and/or production of oil and natural gas in environmentally sensitive offshore areas and onshore lands

(n = 1121)

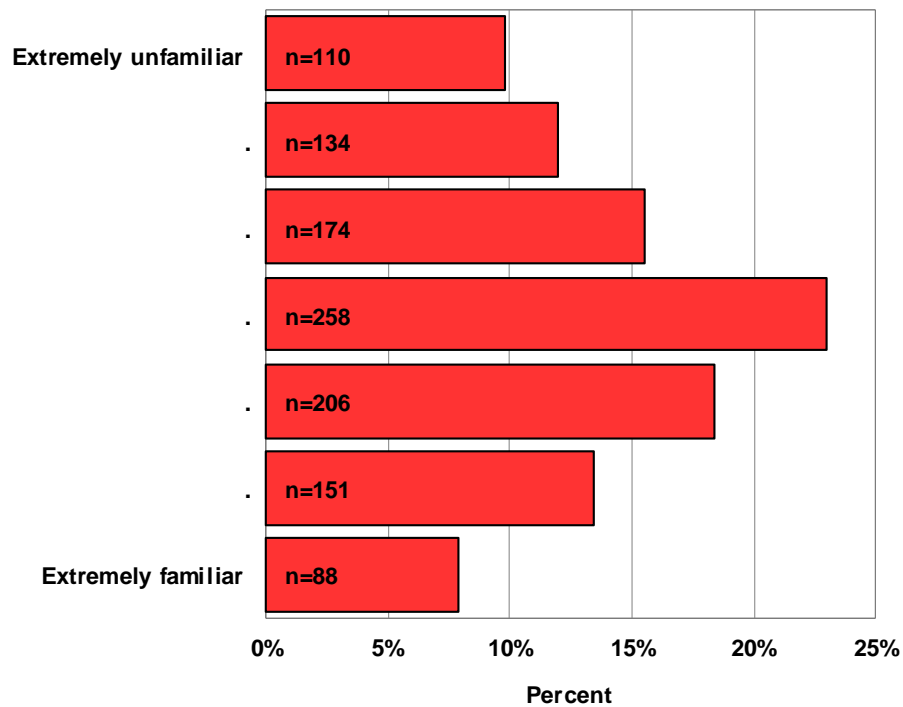


Figure 26

Opinion on the proposal to open up the Arctic National Wildlife Refuge in Alaska for oil and natural gas drilling

(n = 1198)

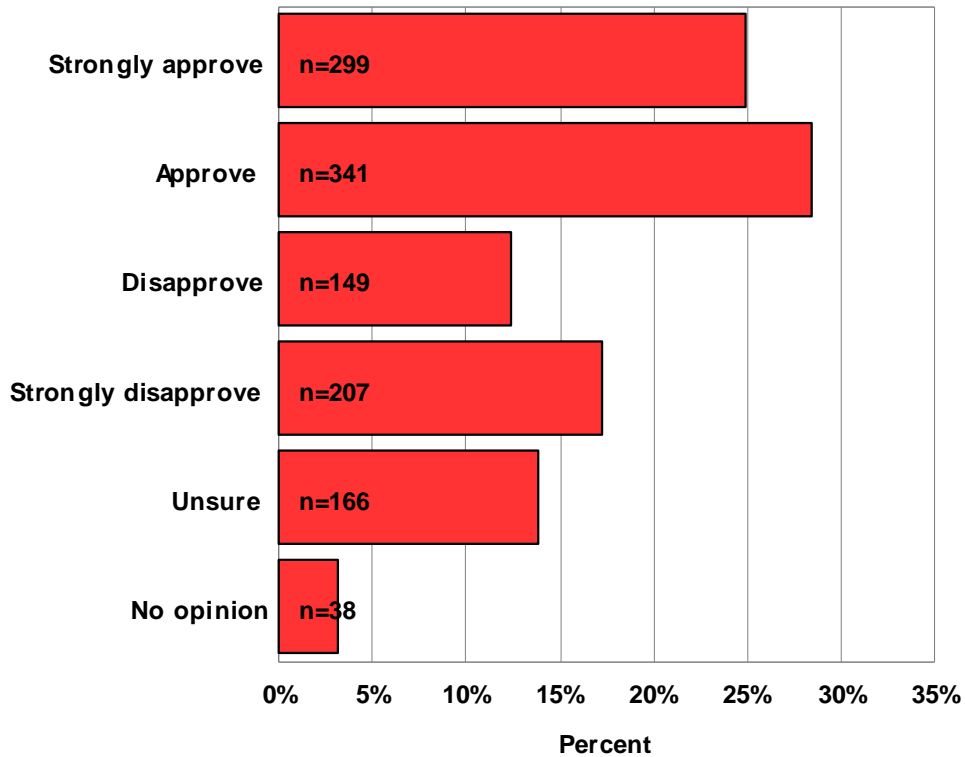


Figure 27

Opinion on the proposal to open up the Arctic National Wildlife Refuge in Alaska for oil and natural gas drilling as the energy industry adopts and uses a more environmentally-friendly approach
(n = 1200)

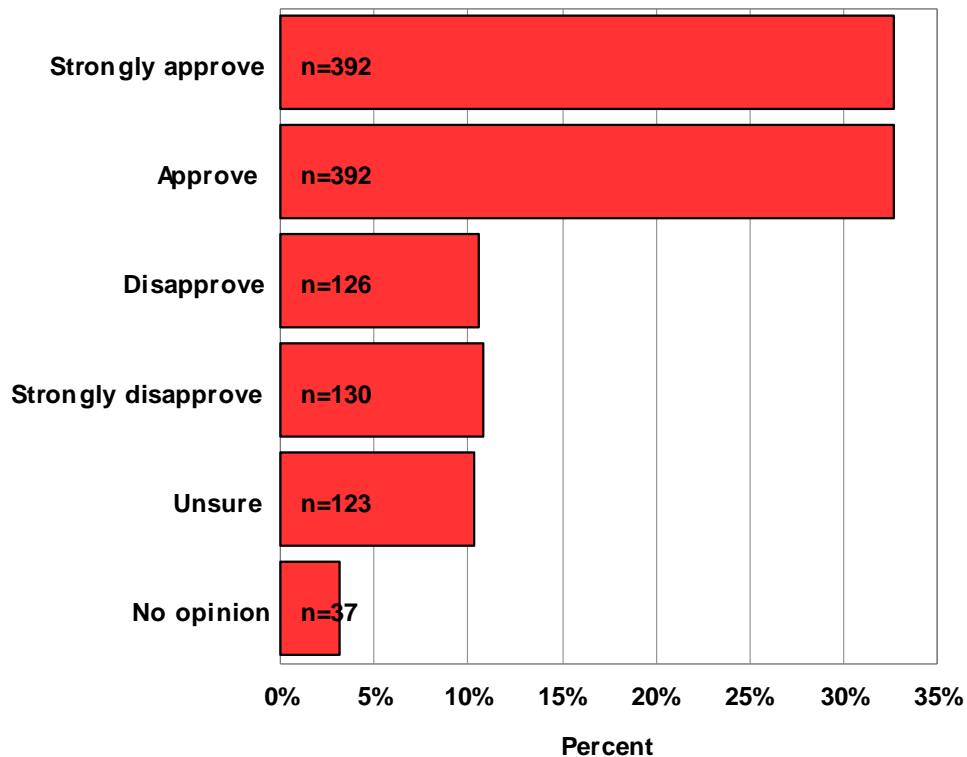


Figure 28a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas on the CONTINENTAL SHELF as the energy industry adopts and uses a more environmentally-friendly approach
(n = 1161)

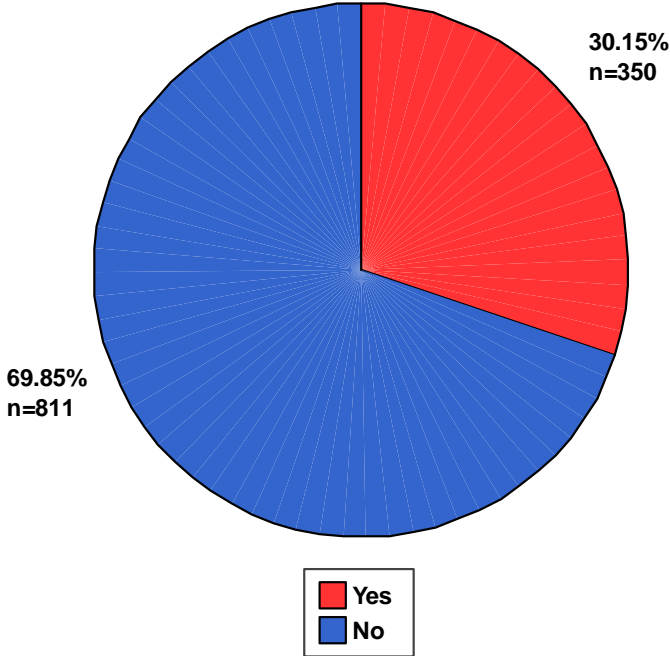
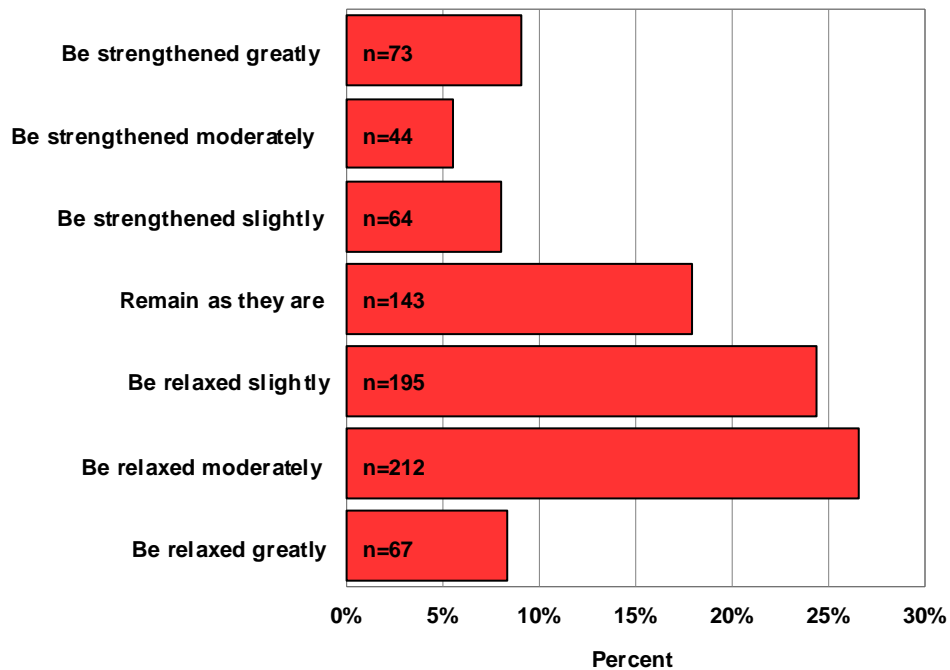


Figure 28b

[includes only respondents who answered “No” in Figure 28a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on the CONTINENTAL SHELF should:

(n = 798)



Mean	4.56
Standard deviation	1.70
coding:	
1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;	
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly	

Figure 29a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas in COASTAL WETLANDS as the energy industry adopts and uses a more environmentally-friendly approach

(n = 1148)

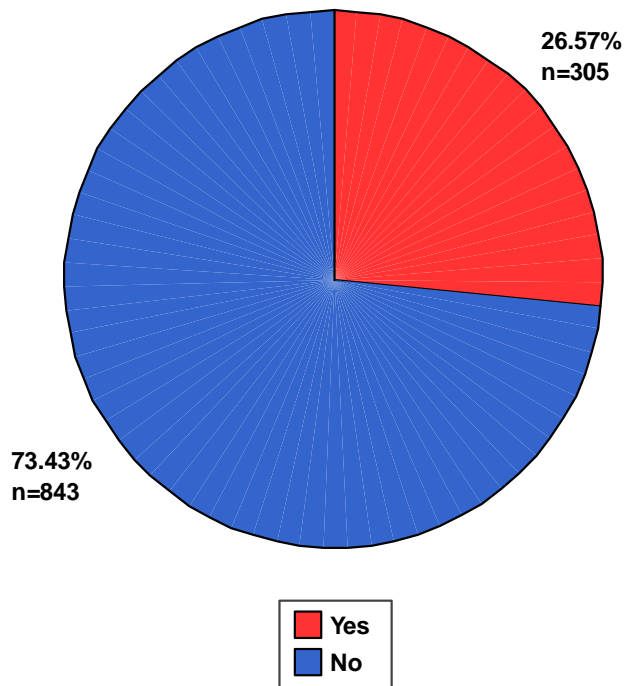
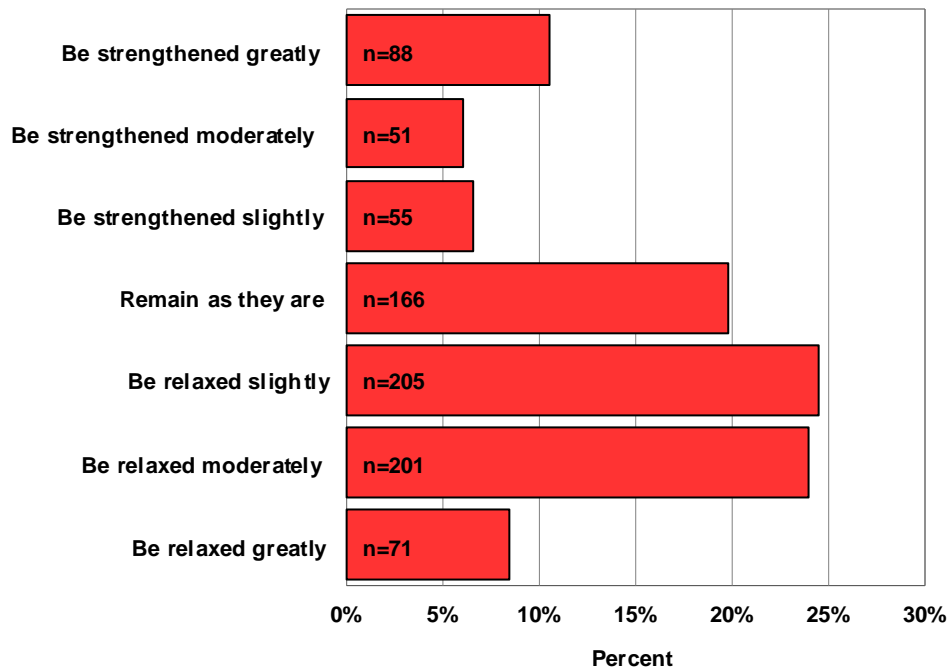


Figure 29b

[includes only respondents who answered “No” in Figure 29a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on the **COASTAL WETLANDS** should:

(n = 837)



Mean 4.48

Standard deviation 1.73

coding:

1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly

Figure 30a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas in DESERT ECOSYSTEMS as the energy industry adopts and uses a more environmentally-friendly approach

(n = 1154)

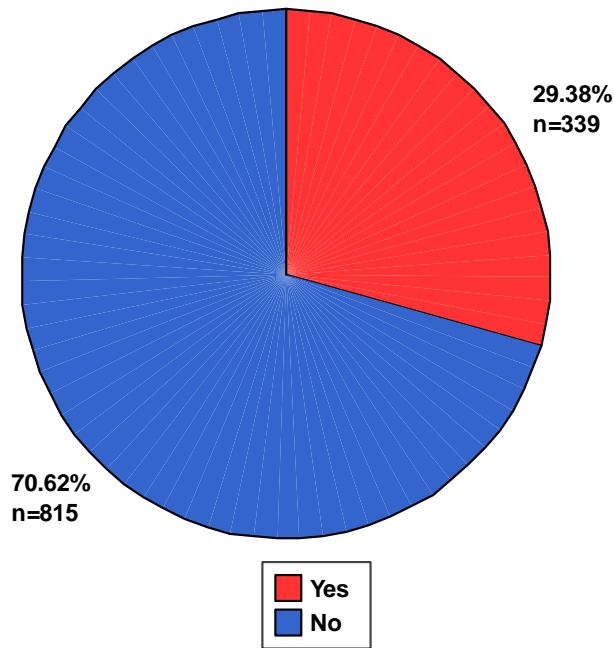
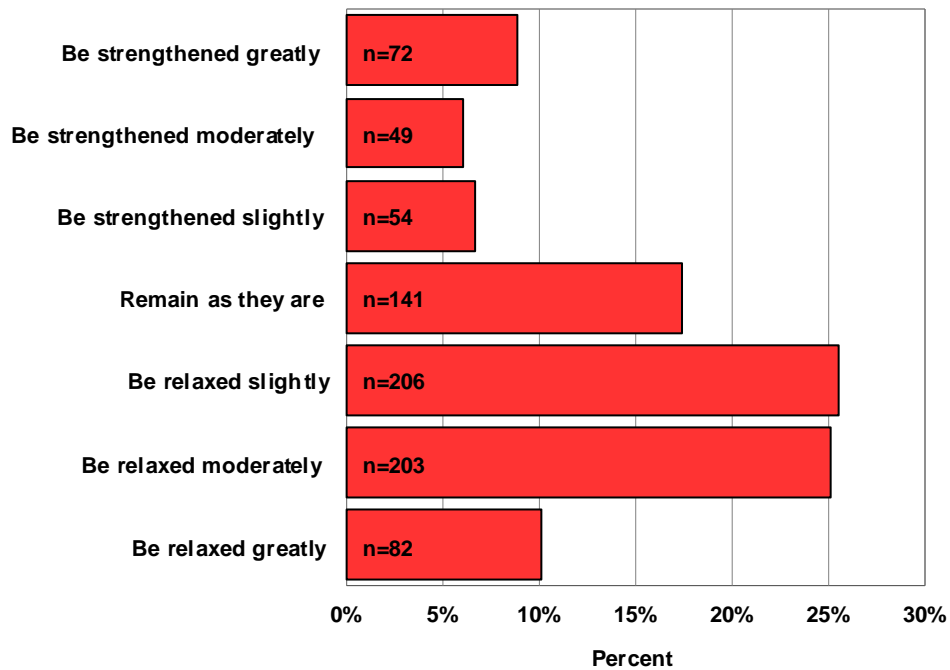


Figure 30b

[includes only respondents who answered “No” in Figure 30a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on the DESERT ECOSYSTEMS should:

(n = 807)



Mean	4.61
Standard deviation	1.71
coding:	
1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;	
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly	

Figure 31a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas in **HARDWOOD FORESTS** as the energy industry adopts and uses a more environmentally-friendly approach

(n = 1168)

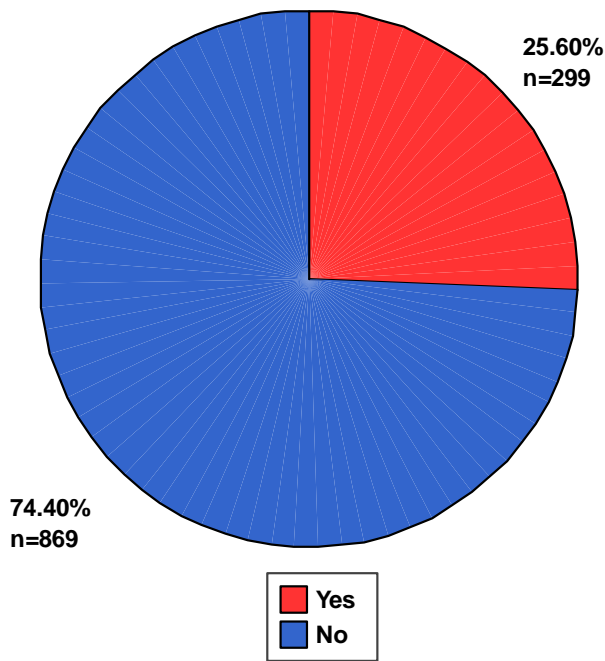
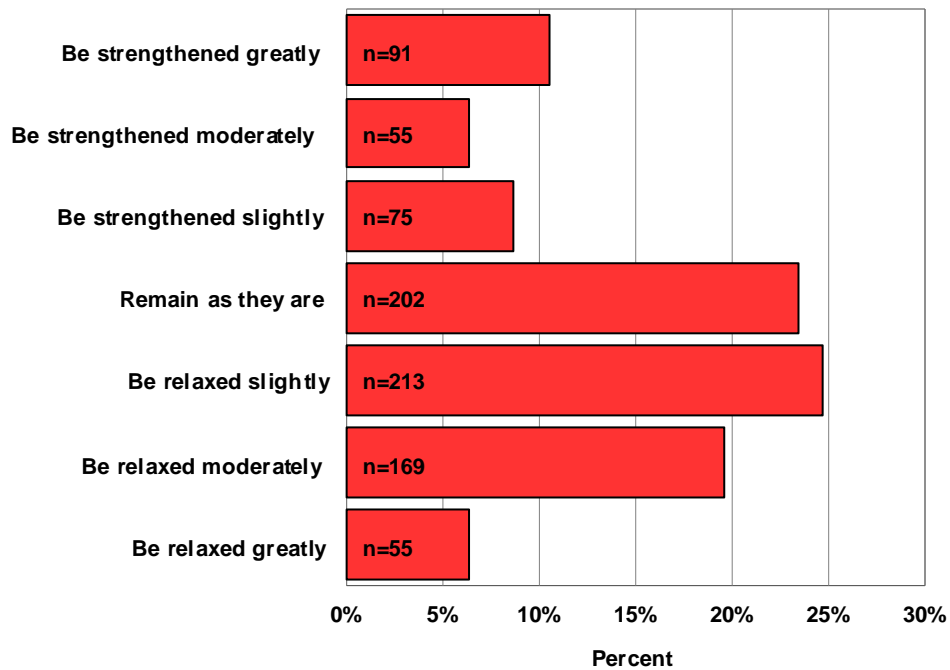


Figure 31b

[includes only respondents who answered “No” in Figure 31a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas in the **HARDWOOD FORESTS** should:

(n = 860)



Mean	4.30
Standard deviation	1.68
coding:	
1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;	
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly	

Figure 32a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas on PRIVATELY-OWNED lands as the energy industry adopts and uses a more environmentally-friendly approach
(n = 1164)

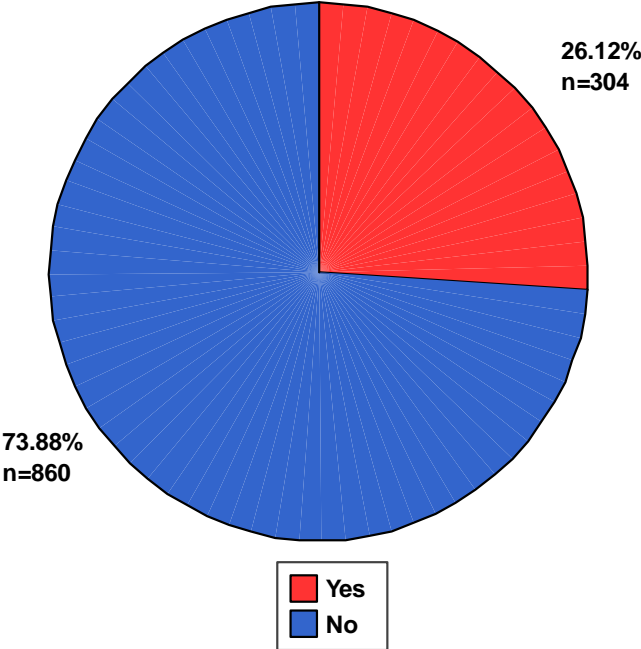
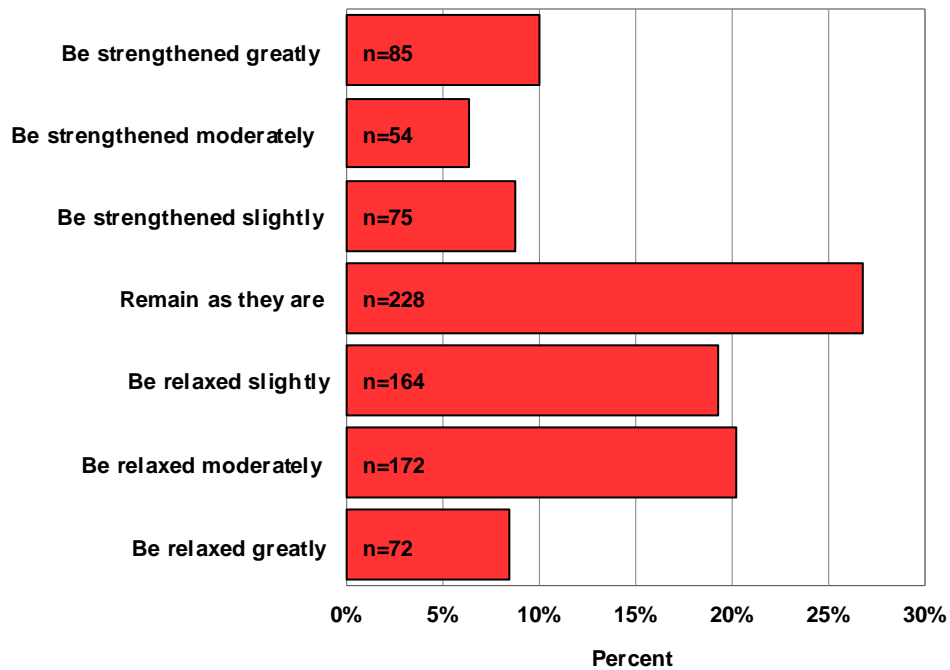


Figure 32b

[includes only respondents who answered “No” in Figure 32a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on PRIVATELY-OWNED LANDS should:

(n = 850)



Mean	4.34
Standard deviation	1.70

coding:
 1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;
 4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly

Figure 33a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the BUREAU OF LAND MANAGEMENT as the energy industry adopts and uses a more environmentally-friendly approach

(n = 1160)

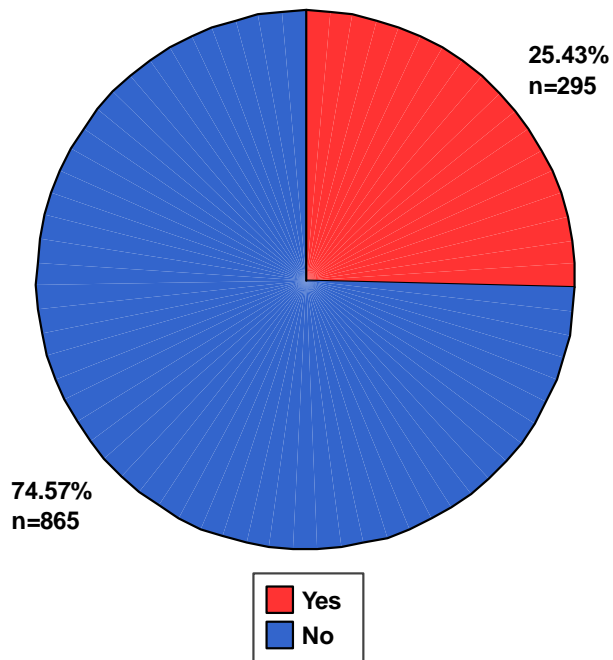
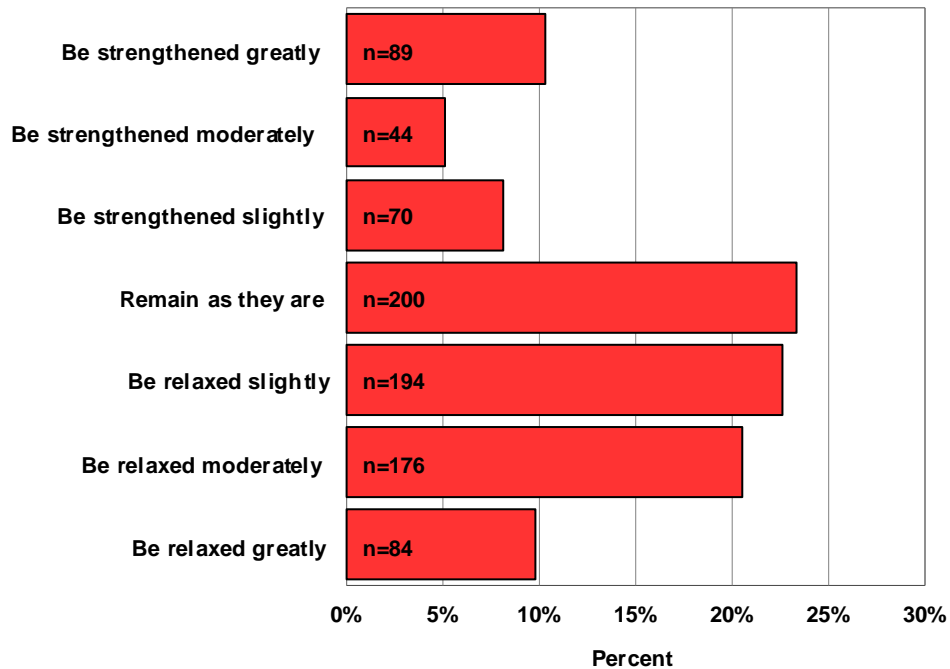


Figure 33b

[includes only respondents who answered “No” in Figure 33a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the BUREAU OF LAND MANAGEMENT should:

(n = 857)



Mean	4.44
Standard deviation	1.72
coding:	
1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;	
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly	

Figure 34a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the FOREST SERVICE as the energy industry adopts and uses a more environmentally-friendly approach
(n = 1166)

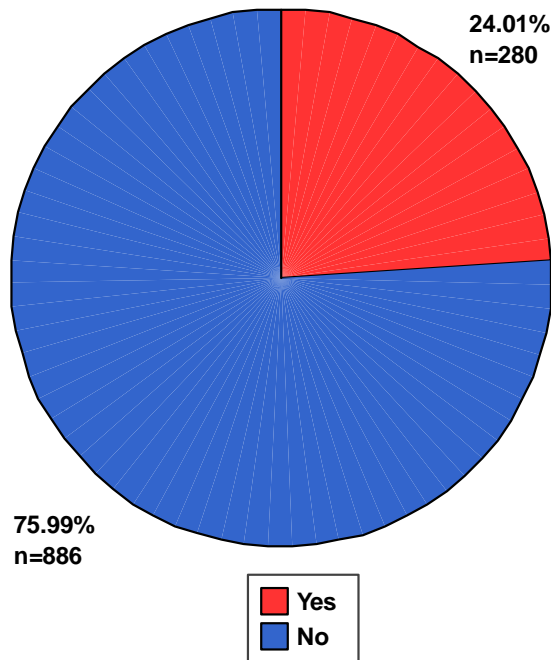
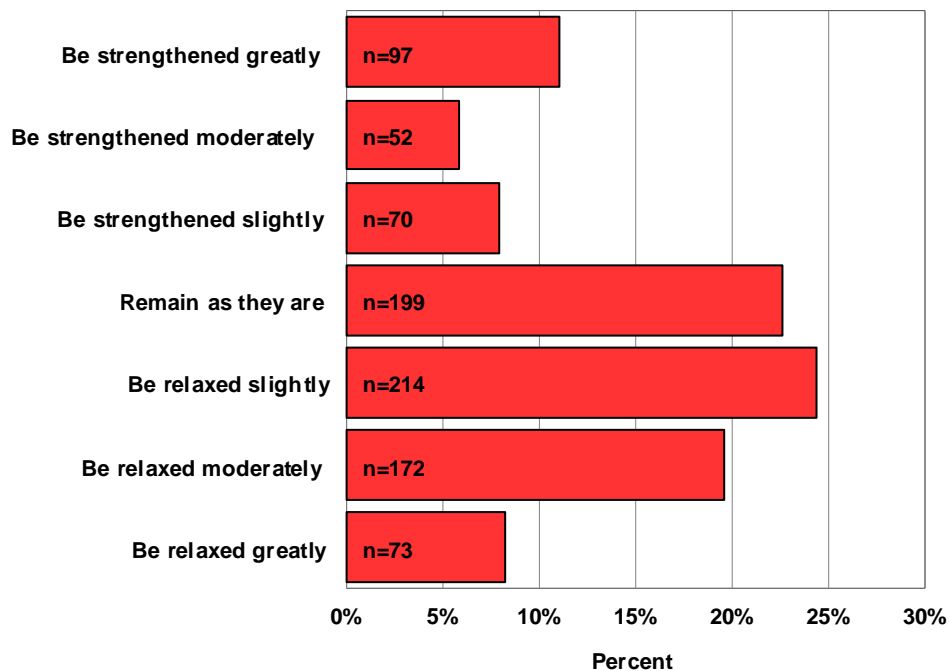


Figure 34b

[includes only respondents who answered “No” in Figure 34a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the FOREST SERVICE should:

(n = 877)



Mean 4.36

Standard deviation 1.72

coding:

1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly

Figure 35a

Agreement to eliminate current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the NATIONAL PARK SERVICE as the energy industry adopts and uses a more environmentally-friendly approach
(n = 1167)

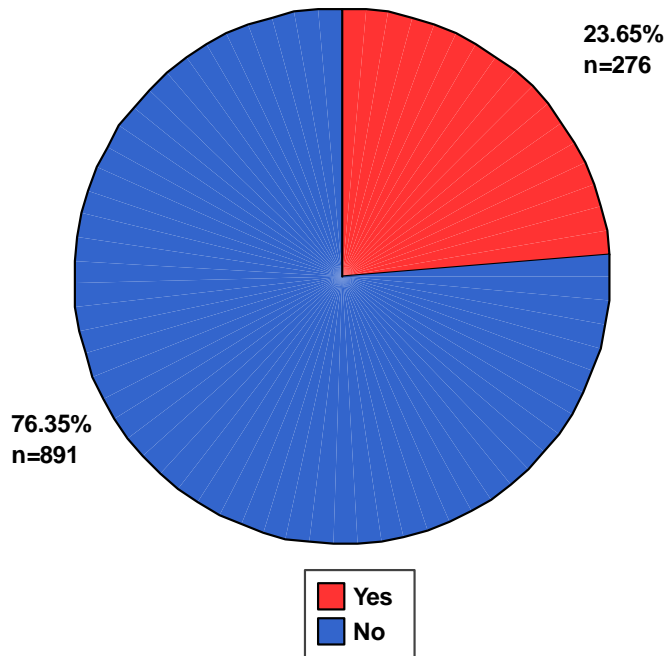
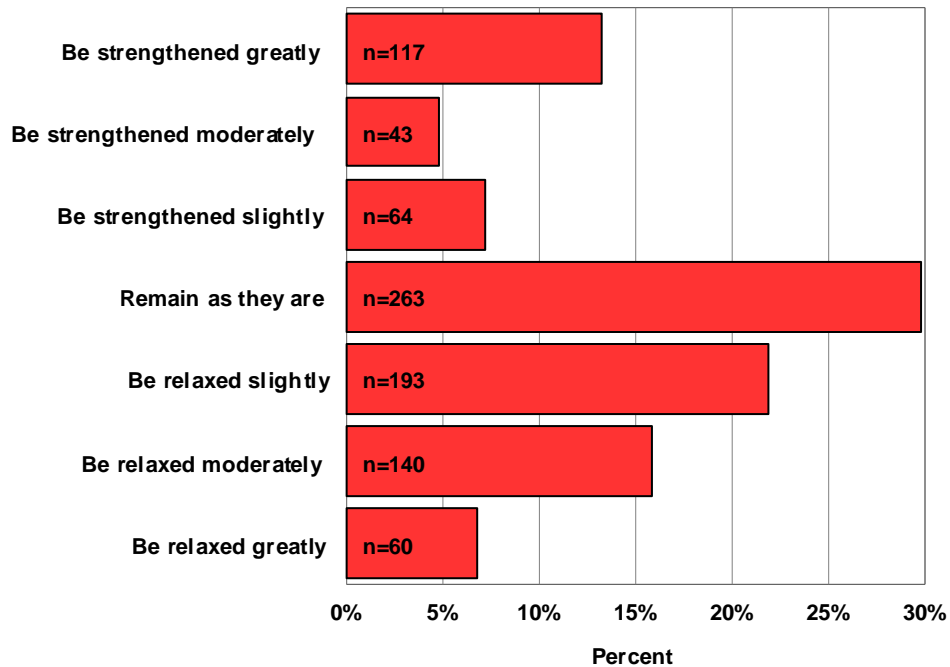


Figure 35b

[includes only respondents who answered “No” in Figure 35a]

As the energy industry adopts and uses a more environmentally-friendly approach, current governmental regulations limiting the exploration and production of oil and natural gas on publicly-owned lands managed by the NATIONAL PARK SERVICE should:
(n = 880)



Mean	4.17
Standard deviation	1.71
coding:	
1 = be strengthened greatly; 2 = be strengthened moderately; 3 = be strengthened slightly;	
4 = remain as they are; 5 = be relaxed slightly; 6 = be relaxed moderately; 7 = be relaxed greatly	

Figure 36

Should the oil and gas industry be required to adopt and use a more environmentally-friendly approach to energy production?

(n = 1137)

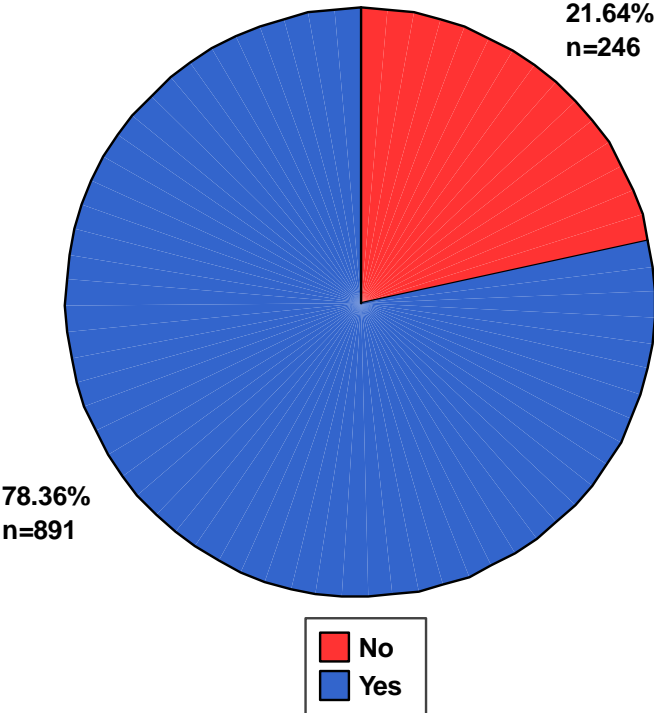


Table 5

Top five agencies proposed to oversee the implementation of a more environmentally-friendly approach to energy production in the oil and natural gas industry

Top five agencies:	n	Percent
Environmental Protection Agency	170	23.7%
Bureau of Land Management	83	11.6%
Department of Energy	70	9.8%
Department of Interior	51	7.1%
Texas Railroad Commission	29	4.1%

Figure 37a

The oil and gas industry is important to the Texas economy.

(n = 1194)

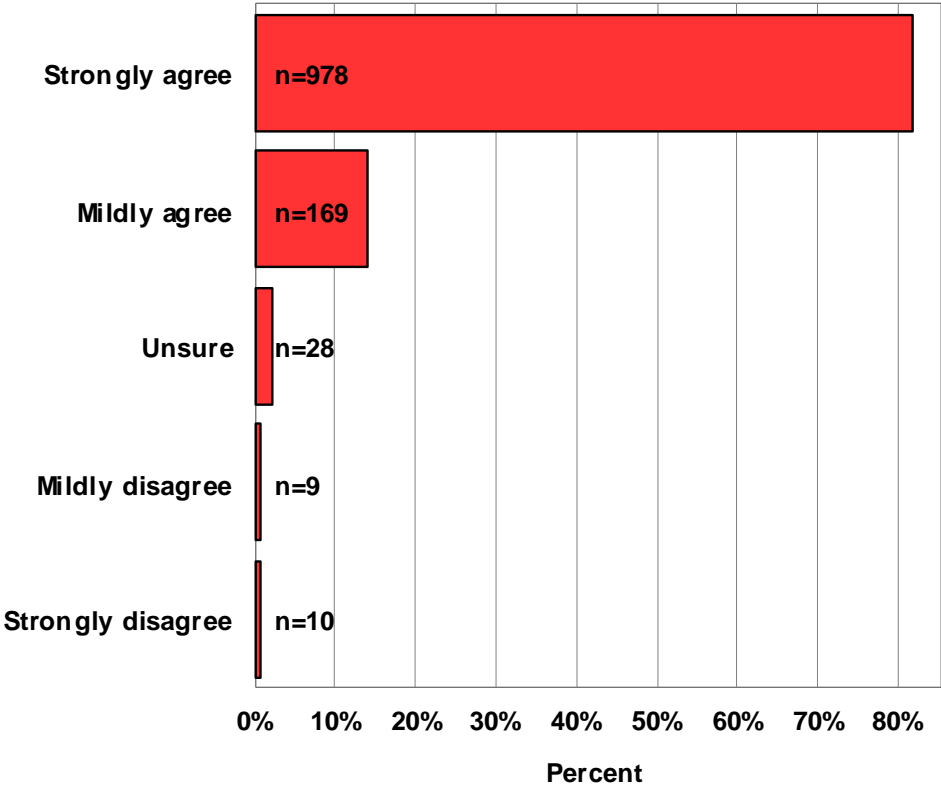


Figure 37b

Oil and gas industry operators in Texas are too politically powerful.

(n = 1189)

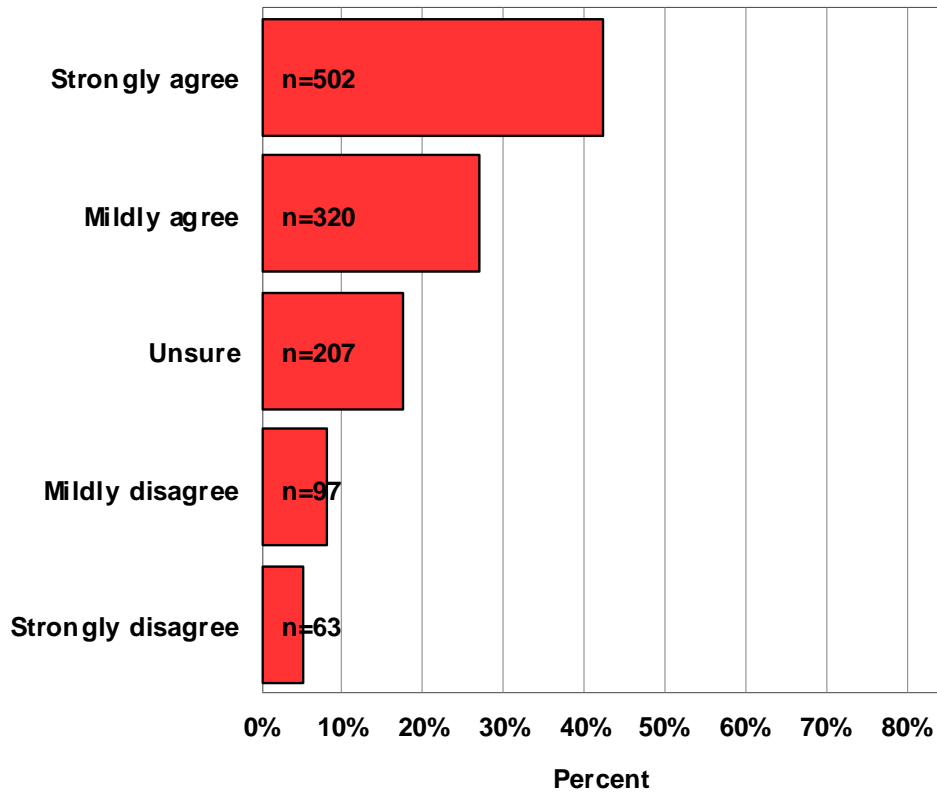


Figure 37c

Decisions about oil and gas-related development in Texas should be made solely on economic grounds.

(n = 1186)

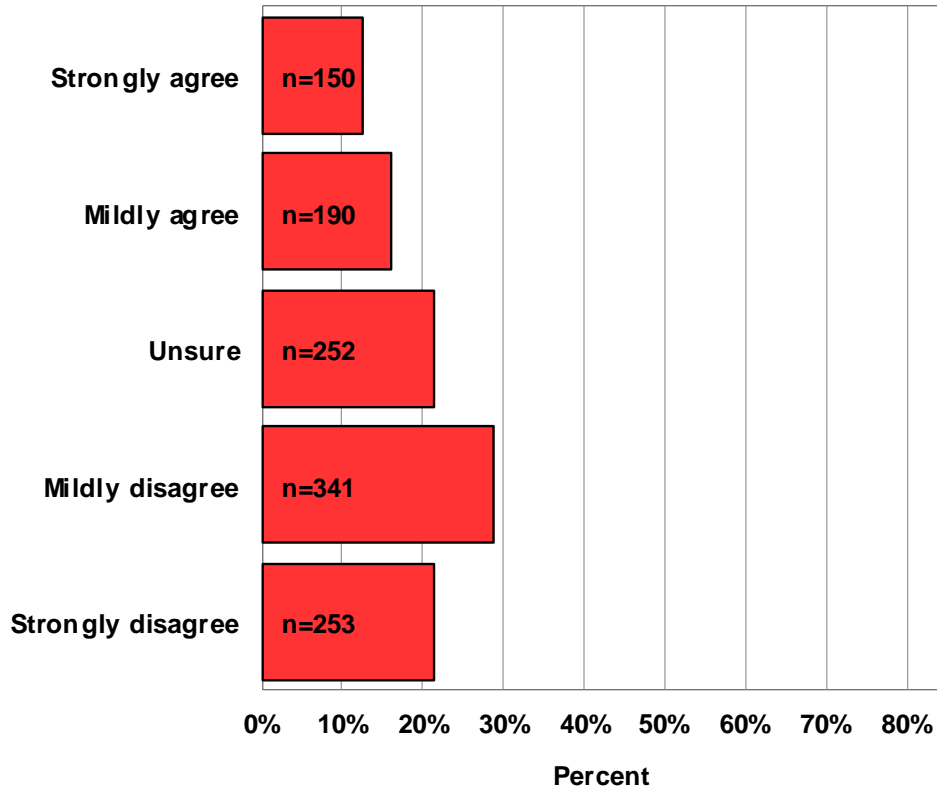


Figure 37d

Not enough information concerning oil and gas development in Texas is being made available to the general public.

(n = 1193)

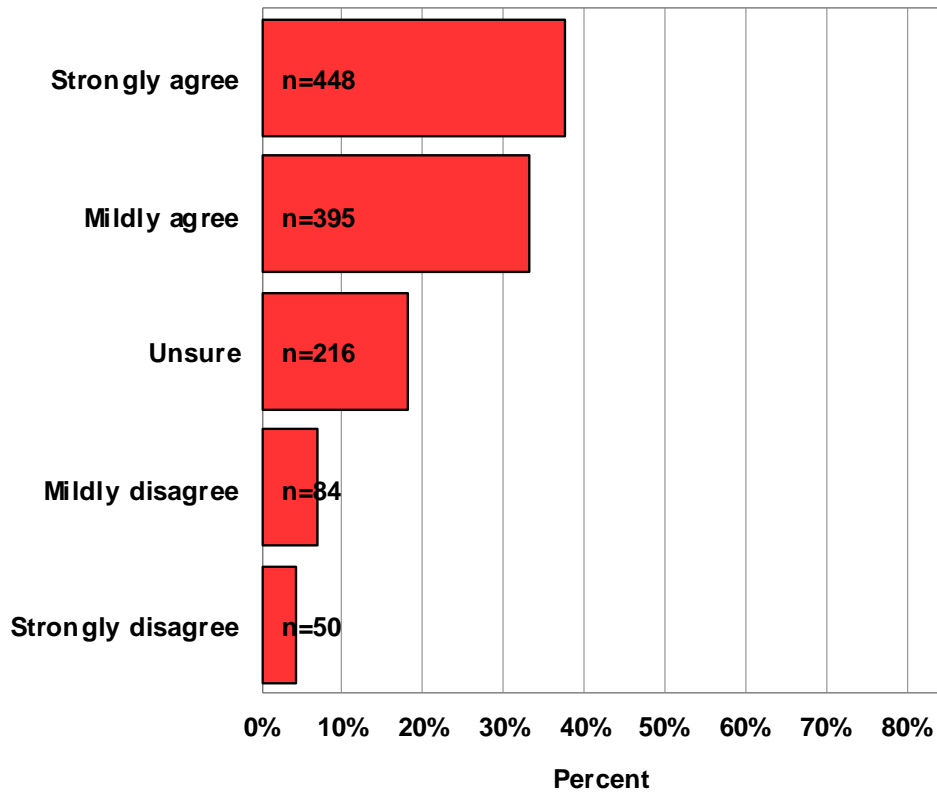


Figure 37e

Even when carefully controlled, oil and gas development is likely to upset the quality of life in Texas.

(n = 1193)

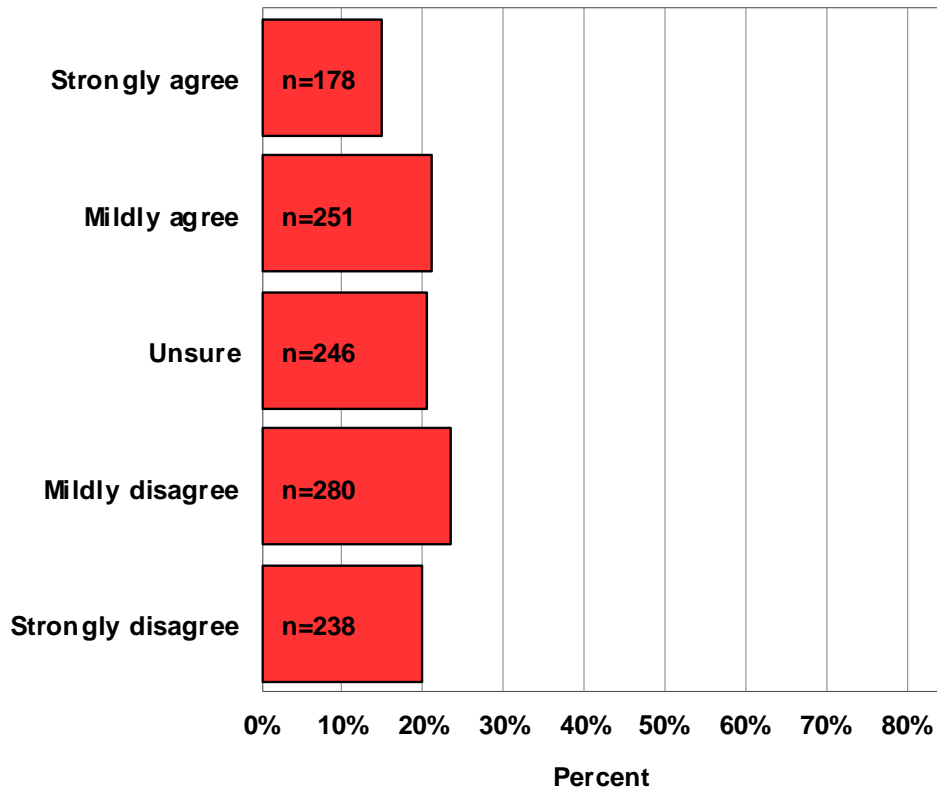


Figure 37f

Too little attention is being paid to the social costs of oil and gas development in our State.

(n = 1179)

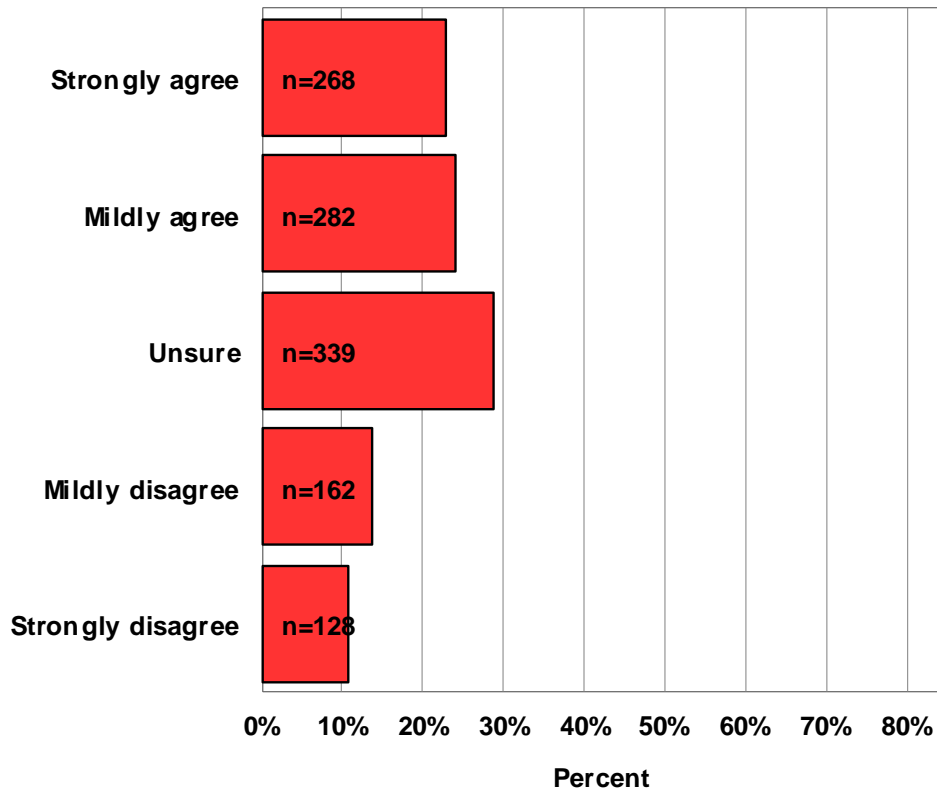


Figure 37g

The oil and gas industry has no compassion for our natural environment.

(n = 1177)

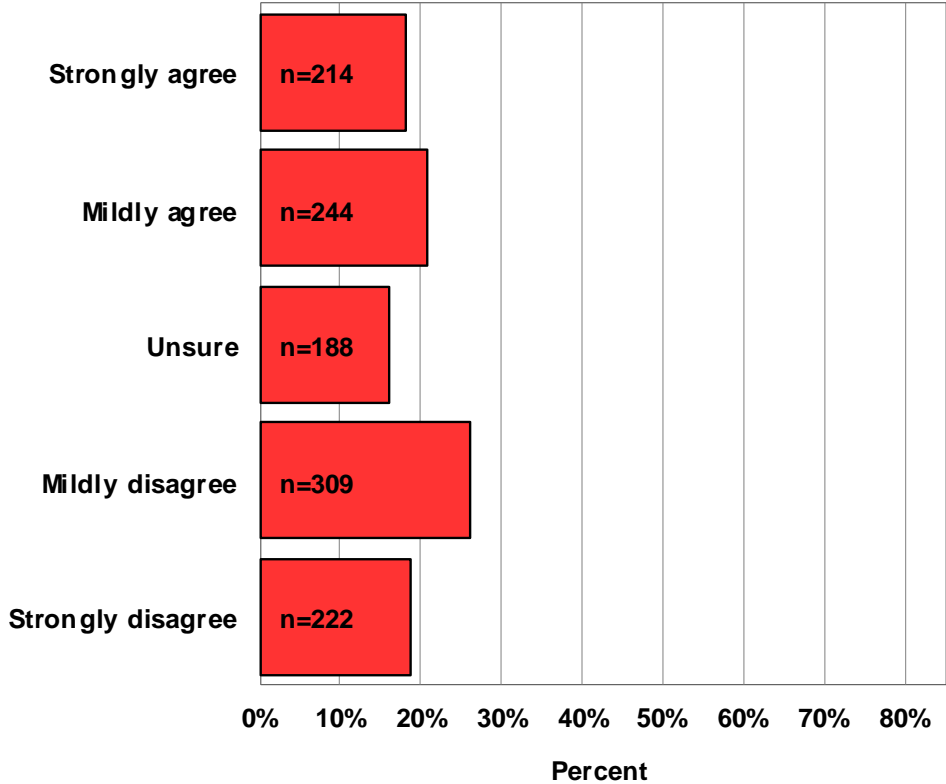


Figure 37h

Because industry has to be competitive, it is unfair to expect oil and gas companies to tell the public about their plans.

(n = 1185)

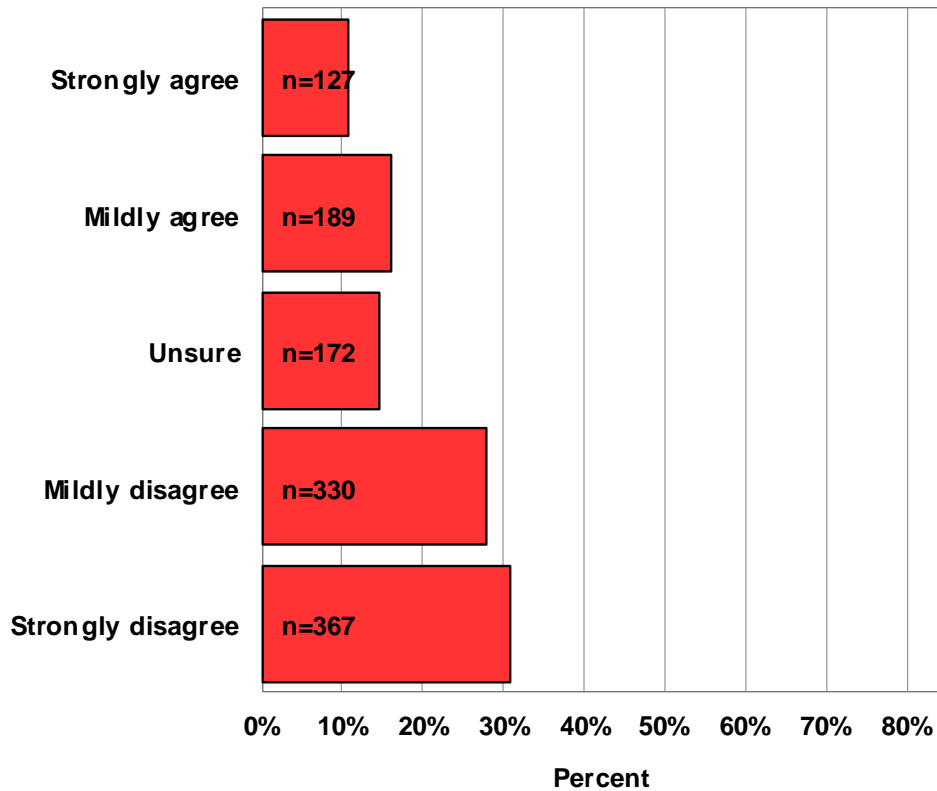


Figure 37i

All in all, the benefits of oil and gas development are greater than the costs.

(n = 1176)

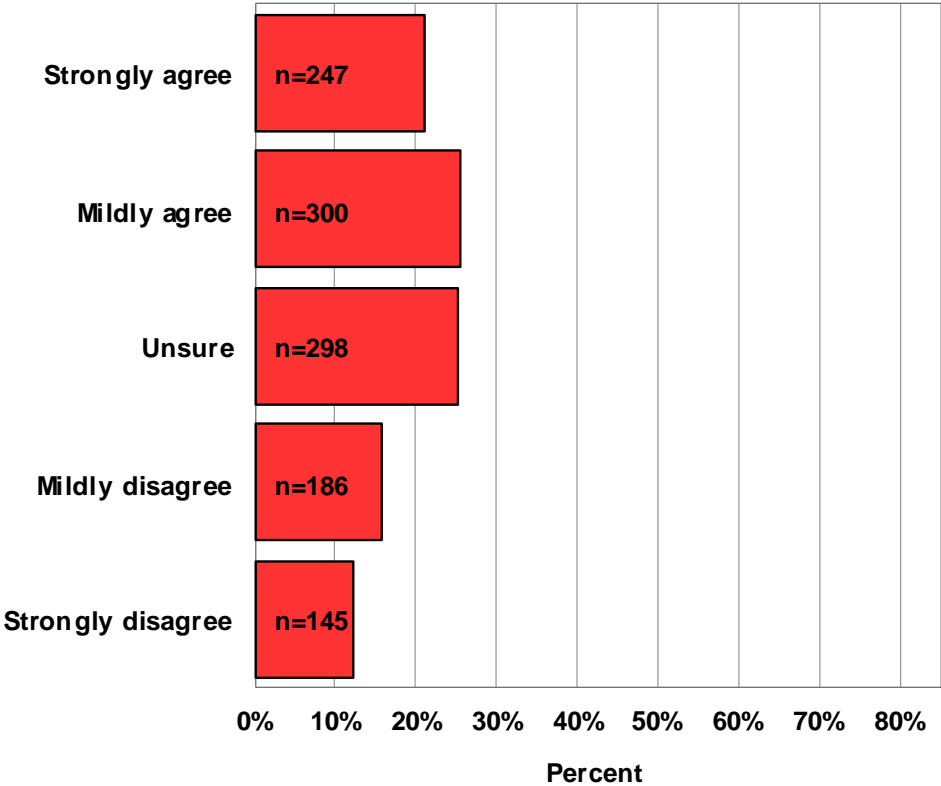


Figure 37j

The oil and gas industry **MUST** adopt and use more environmentally-friendly drilling practices.

(n = 1185)

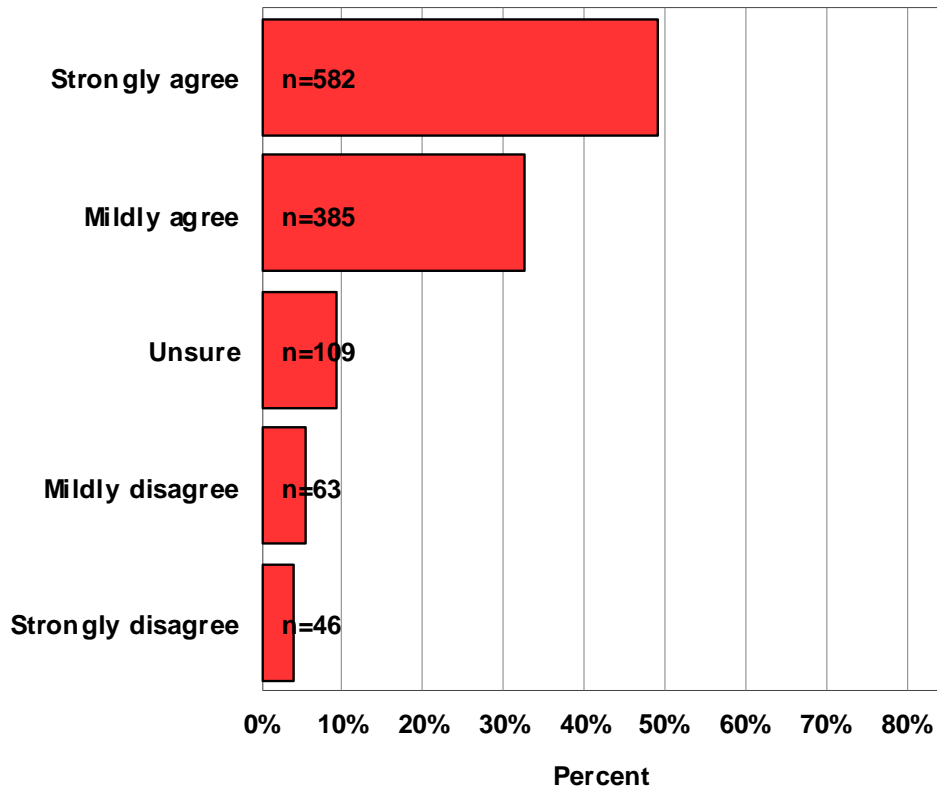


Figure 37k

Oil and gas companies will do only what's required by law.

(n = 1182)

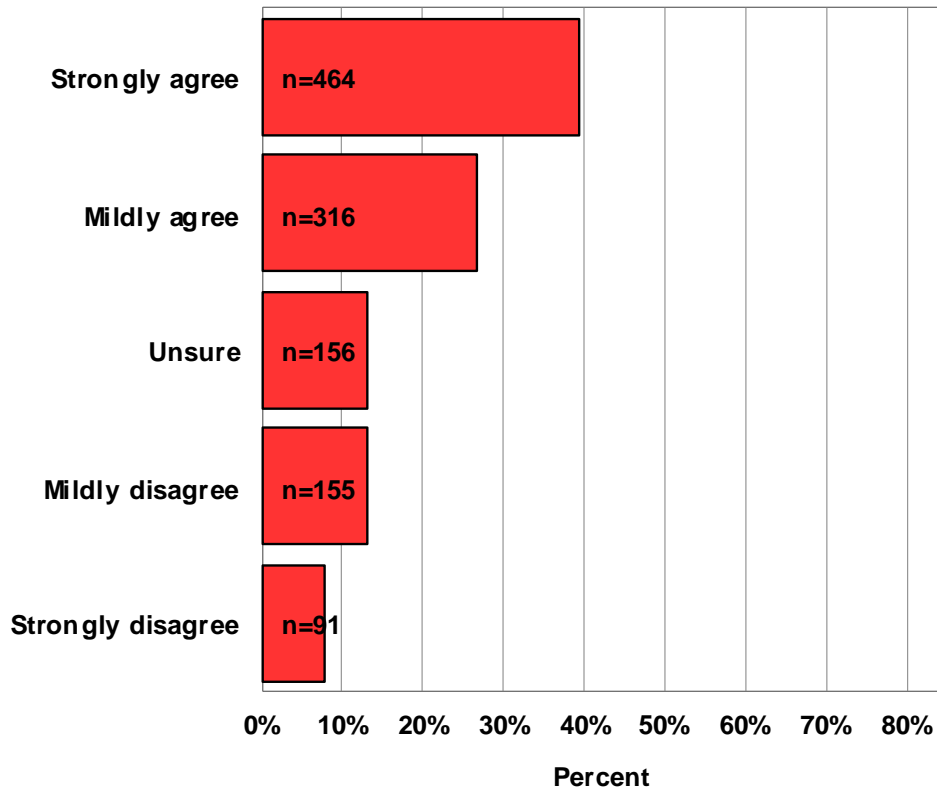


Figure 37I

In the long run, I'm sure that people in Texas will be better off if our energy resources are developed.

(n = 1183)

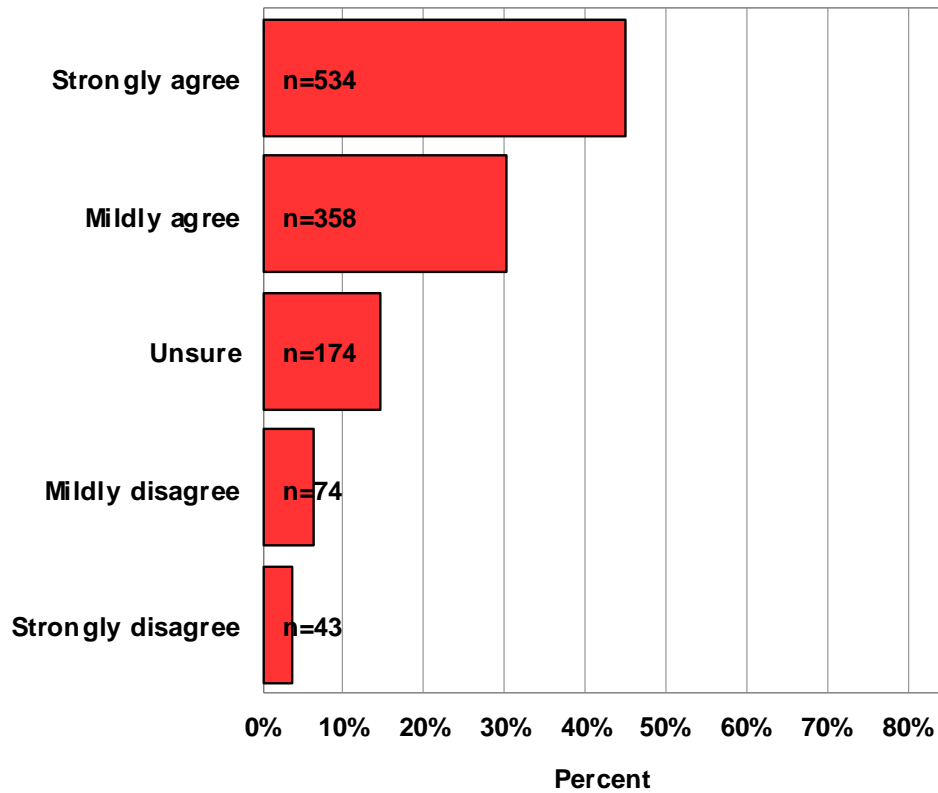


Figure 37m

Oil and gas operators are drilling and producing too close to homes and businesses.

(n = 1187)

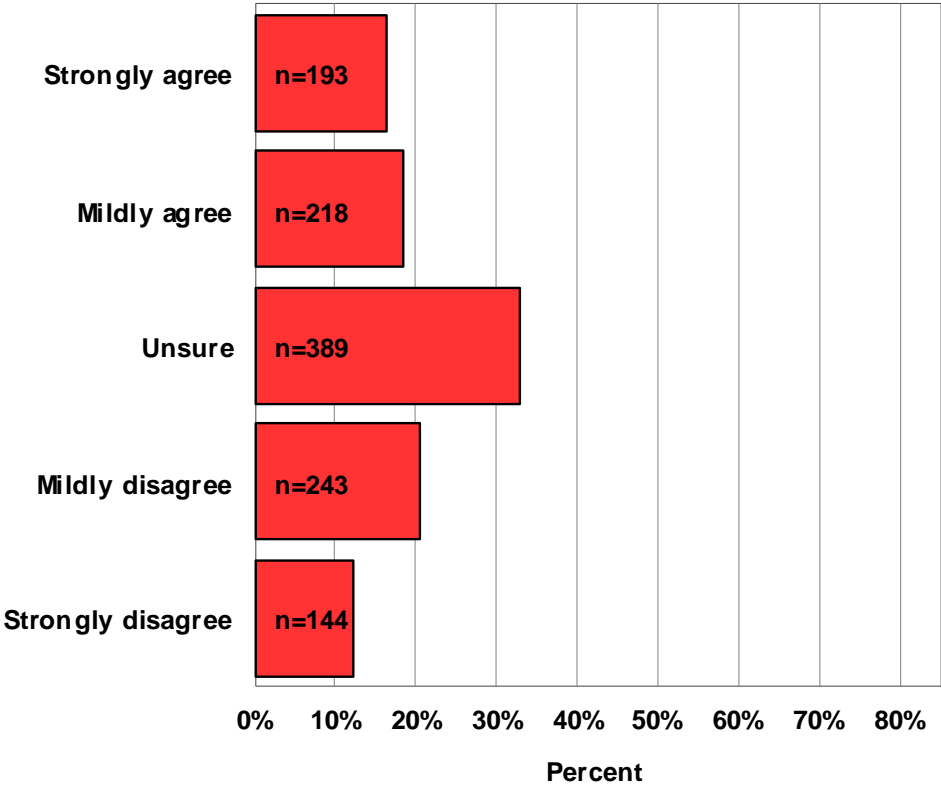


Figure 37n

People who object to oil and gas development in Texas should move someplace else.

(n = 1175)

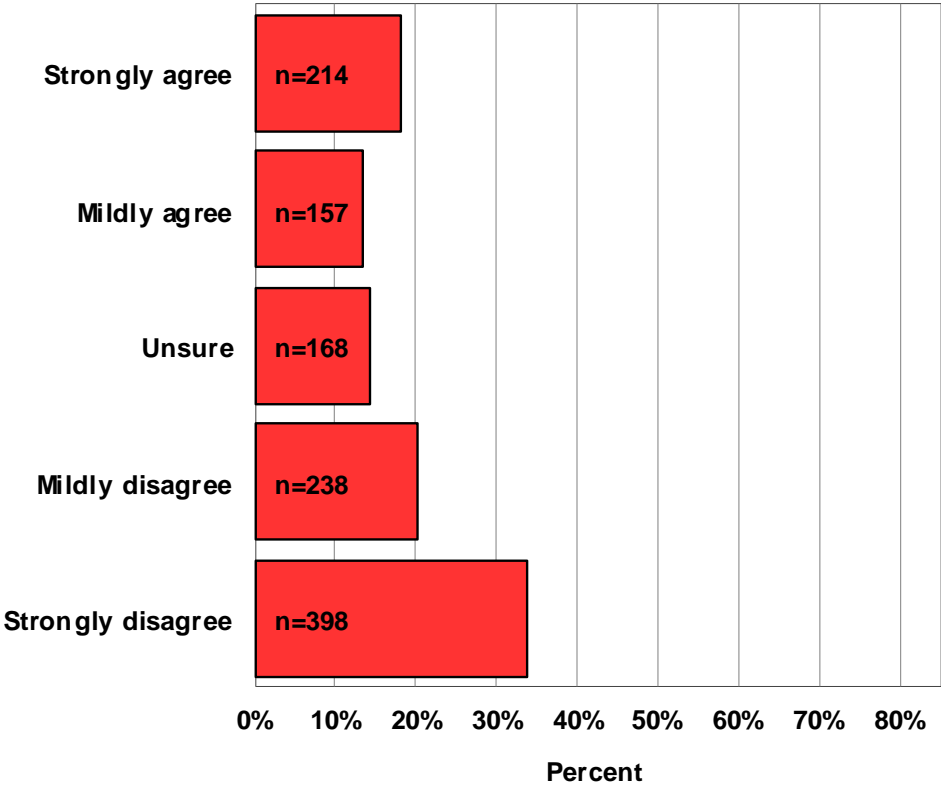


Table 6

Eight actions possibly taken in response to the exploration and production of oil and/or natural gas on environmentally sensitive lands

Actions	Have You?		How likely are you to do this in the future?		
	Yes	No	Not Likely	Somewhat Likely	Very Likely
Attended a public meeting to get information and learn more about the drilling and/or production of oil and natural gas on environmentally sensitive lands.	10.4%	89.6%	43.9%	43.6%	12.5%
Contacted a local elected official or governmental agency to complain about an oil and natural gas drilling and/or production issue on environmentally sensitive lands.	9.1%	90.9%	59.8%	29.0%	11.2%
Voted FOR a political candidate because of his/her position on the drilling and/or production of oil and natural gas on environmentally sensitive lands.	34.7%	65.3%	33.8%	32.1%	34.1%
Voted AGAINST a political candidate because of his/her position on the drilling and/or production of oil and natural gas on environmentally sensitive lands.	30.7%	69.3%	37.8%	28.3%	34.0%
Attended an energy industry-sponsored meeting to get information and learn more about the exploration and/or production of oil and natural gas on environmentally sensitive lands.	10.2%	89.8%	47.9%	40.2%	11.9%
Attended a public meeting to OPPOSE the exploration and/or production of oil and gas on environmentally sensitive lands.	3.9%	96.1%	62.6%	29.5%	7.9%
Attended a public meeting to SUPPORT the exploration and/or production of oil and gas on environmentally sensitive lands.	6.1%	93.9%	57.1%	32.3%	10.6%
Wrote and mailed a letter to the editor of your local newspaper about the exploration and/or production of oil and natural gas on environmentally sensitive land.	3.9%	96.1%	68.7%	23.2%	8.1%

Section IV

Desalination

Desalination is a process by which salt and other contaminants are removed from the water produced in gas and oil operations. With desalination technology, such water is treated and purified. In turn, a beneficial freshwater resource that can be used in many different ways is created.

Figures 38 through 40 and Tables 7 and 8 summarize respondents' level of familiarity with the process of desalination and their attitudes toward desalinated water.

Figure 38

Level of familiarity with the process of desalination

(n = 1112)

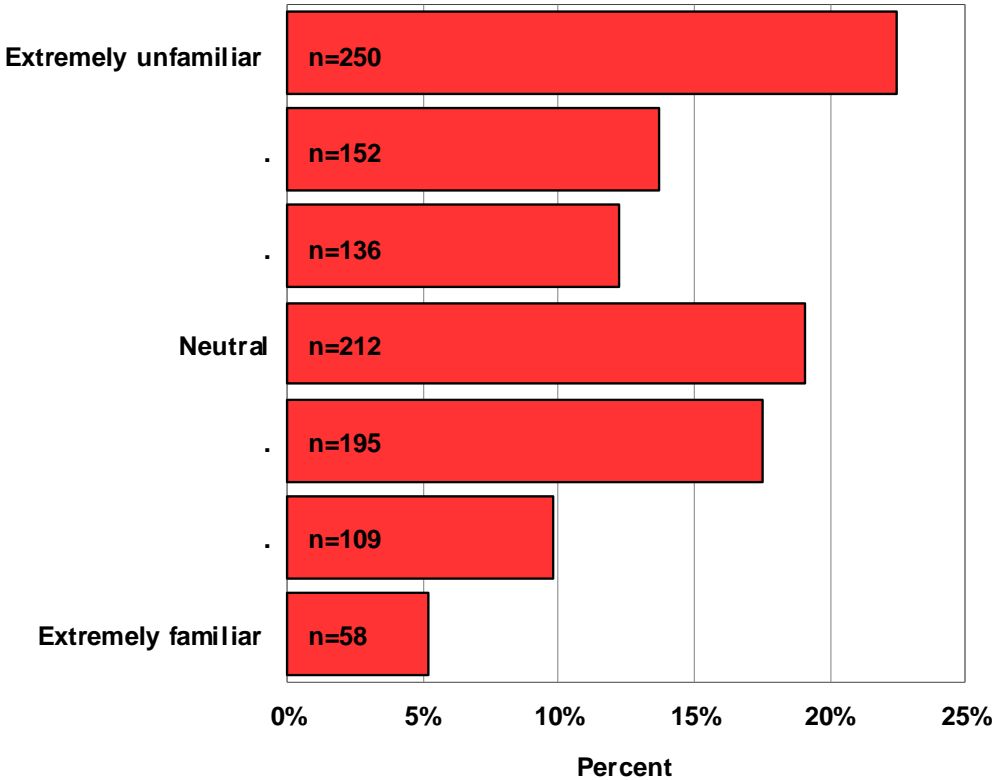


Table 7

A ranking of ways desalinated water from gas and oil field operations might be used safely

Ways desalinated water could be safely used:	Yes	No
Re-use by gas and oil industry operators	94.0%	6.0%
Industrial use (e.g., manufacturing, etc.)	93.7%	6.3%
Municipal uses (e.g., watering of golf courses and city parks, etc.)	81.8%	18.2%
Home irrigation purposes (e.g., watering lawns and shrubs, etc.)	78.6%	21.4%
Irrigation of farmland and/or rangeland	68.3%	31.7%
Maintenance of stream flows/reservoir levels	51.6%	48.4%
Watering of livestock	45.7%	54.3%
Aquifer recharge	44.8%	55.2%
People's drinking water	30.2%	69.8%

Figure 39

Level of confidence that desalinated water from gas and oil field operations could meet HUMAN DRINKING WATER quality and purity standards

(n = 1116)

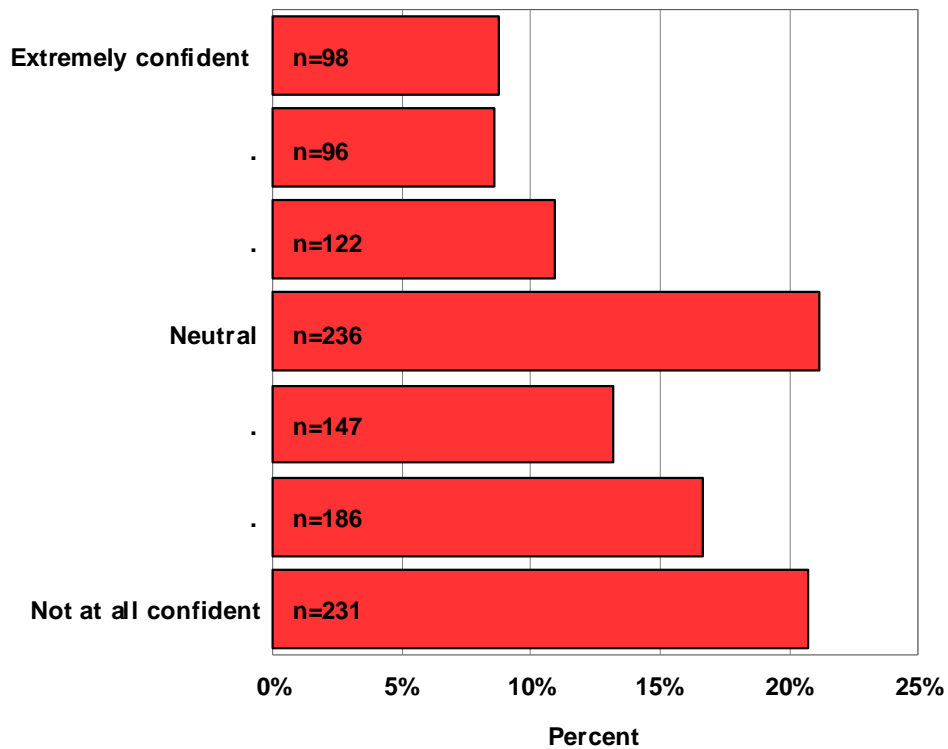


Figure 40

Should industry operators be required to desalinate water produced in the drilling and production of oil and natural gas?

(n = 1040)

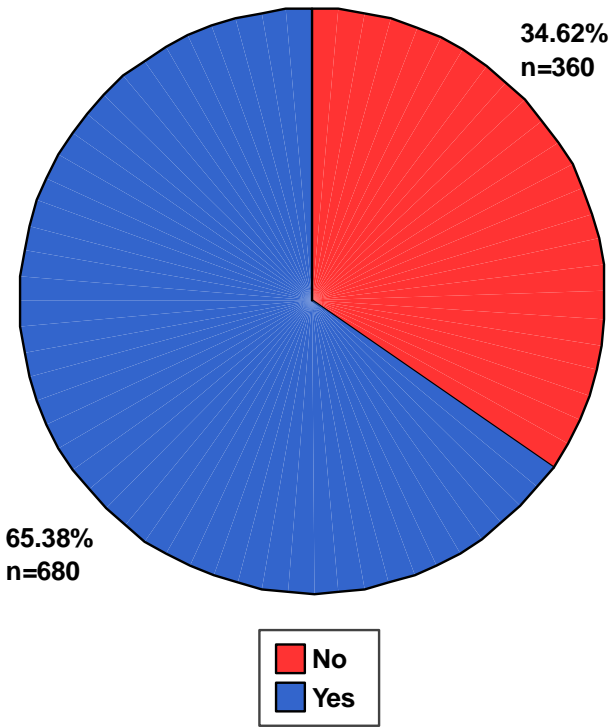


Table 8

If available for purchase, who would be likely to buy desalinated water?

Potential customers:	n
Industrial	478
Agricultural	457
Municipal	406
General public	38
Other	179

Note

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