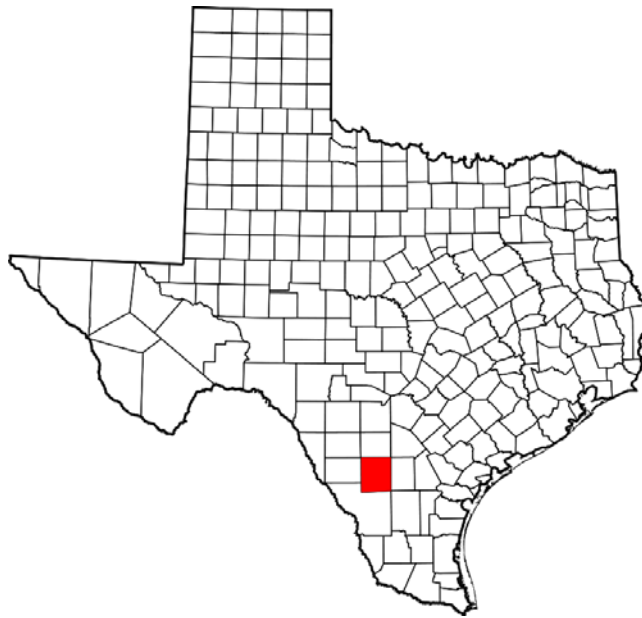


# **Public Perceptions of Oil and Natural Gas Development in La Salle County, Texas: A Summary Report**



Prepared by:

**Gene L. Theodori**  
Sam Houston State University

**Adrian B. Uzunian**  
Utah State University

September 2015

## **Acknowledgement**

Support for this research was provided by a grant from the Houston Advanced Research Center (HARC).

We wish to express our gratitude to the citizens of La Salle County, Texas. We also want to extend a special thanks to Kristen Koci and Ashley Volkmer for helping collect, code, and clean the data.

## Table of Contents

<b>Acknowledgement</b> .....	2
<b>Introduction</b> .....	4
<b>Methodology</b> .....	5
<b>Section I</b> .....	6
Public Perspectives.....	6
<b>Section II</b> .....	28
Potential Problems in La Salle County .....	28
<b>Section III</b> .....	77
Trust .....	77
<b>Section IV</b> .....	92
Oil and Gas Industry Performance .....	92
<b>Section V</b> .....	105
Actions Which May or May Not Have Been Taken in Response to the Exploration and Production of Oil and Natural Gas .....	105
<b>Section VI</b> .....	122
Satisfaction with Communication.....	122
<b>Section VII</b> .....	130
Management Decisions.....	130
<b>Section VIII</b> .....	151
Hydraulic Fracturing.....	151
<b>Section IX</b> .....	183
Frac Flowback Water.....	183
<b>Section X</b> .....	187
Individual-Level Characteristics .....	187
<b>Note</b> .....	210

## Introduction

This report provides a summary of the results obtained from a 2015 survey of residents and absentee landowners in La Salle County, Texas.

The purpose of this document is to provide insights into the public's perception of the energy industry. Moreover, the report includes information on their reported knowledge, attitudes and behaviors related to natural gas development, including their views about hydraulic fracturing and possible uses of treated wastewater from these operations. Figures and tables are used to simplify presentation of the data.<sup>1</sup> No conclusions or inferences are made. Individuals interested in statistical analyses and more detailed information should contact Dr. Gene L. Theodori at:

Sam Houston State University  
Department of Sociology  
Center for Rural Studies  
Box 2446  
Huntsville, TX 77341-2446

Phone: (936) 294-4143  
Fax: (936) 294-3573  
Email: [gtheodori@shsu.edu](mailto:gtheodori@shsu.edu)

---

<sup>1</sup> Percentages in figures and tables may not add to 100 due to rounding error.

## **Methodology**

Following a modified tailored design method, data were gathered using mail survey techniques. In February 2015, an informational letter was first mailed to a random sample of 525 residents and absentee landowners in La Salle County, Texas. The informational letter informed sampled individuals that their household was randomly selected for participation in an upcoming study on public perceptions of oil and natural gas development in the Eagle Ford Shale region of Texas. Three sampled individuals contacted the researchers at SHSU and requested not to participate in the study, reducing the sample size to 522.

In March 2015, a survey questionnaire was mailed to the sampled individuals. To obtain a representative sample of individuals within residences, a response from the adult who most recently his/her birthday was requested in the cover letter. The survey questionnaire, organized as a self-completion booklet, contained 39 questions and required approximately 50 minutes to complete. After the initial survey mailing and two follow-up mailings during April and May of 2015, a total of 44 questionnaires were returned.

## **Section I**

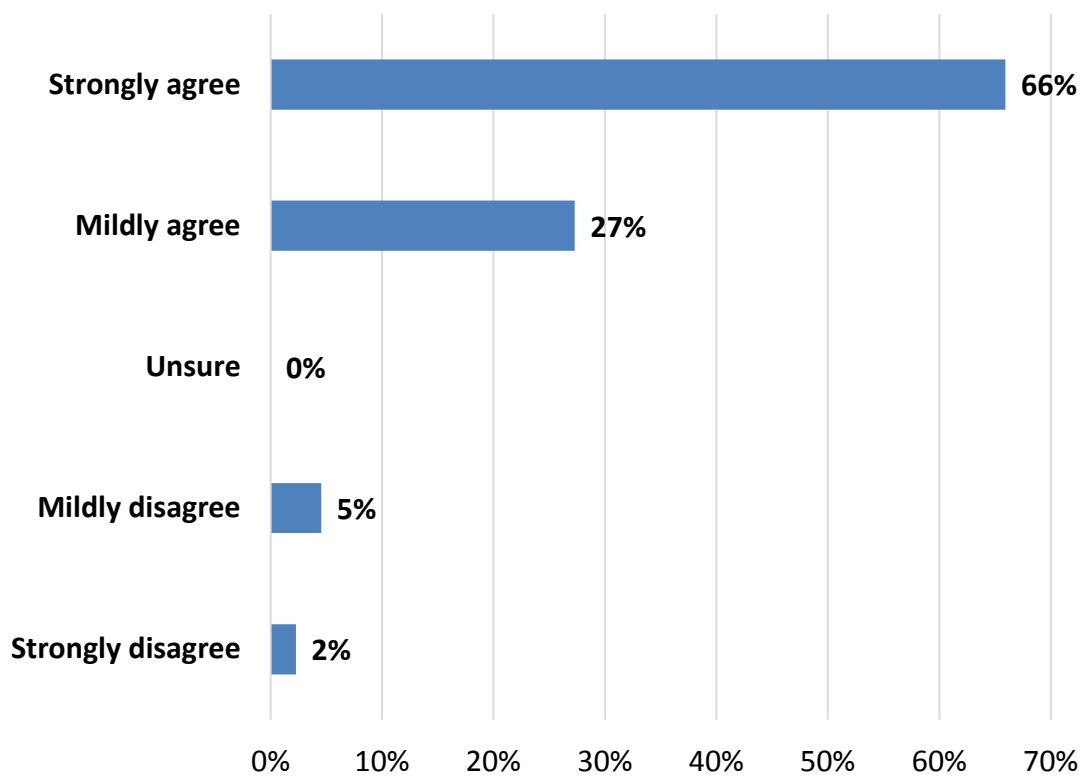
# Public Perspectives

Figures 1a through 1u illustrate respondents' perspectives on various issues related to oil and natural gas development in the Eagle Ford Shale.

**Figure 1a**

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

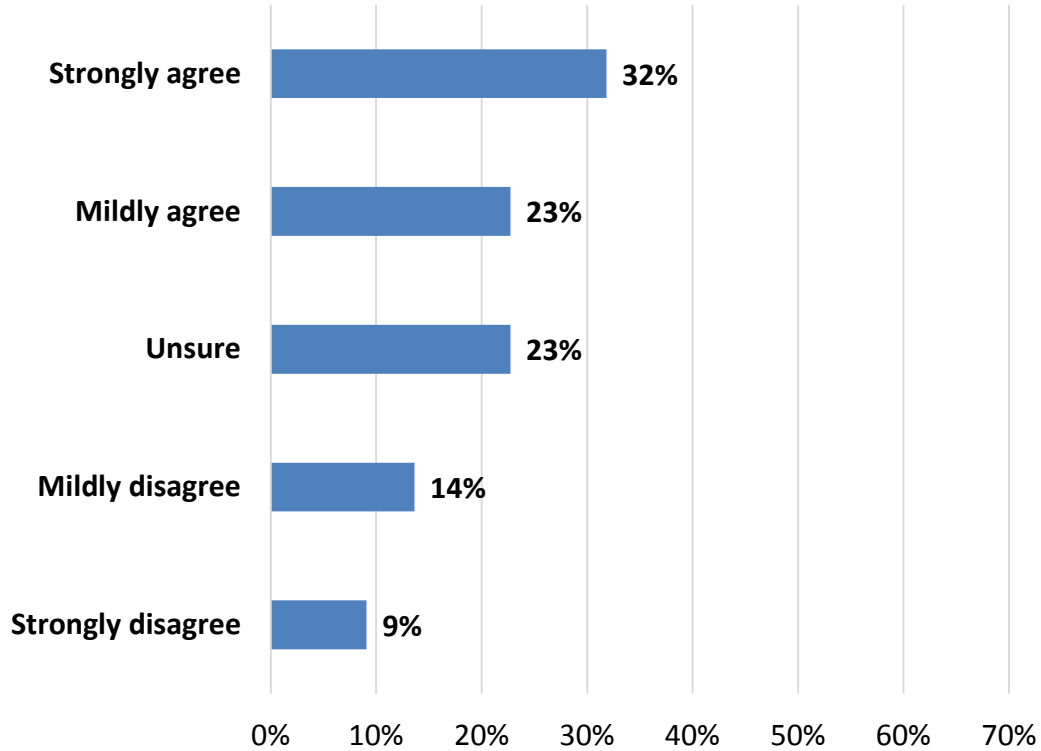
(n = 44)



## Figure 1b

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

(n = 44)

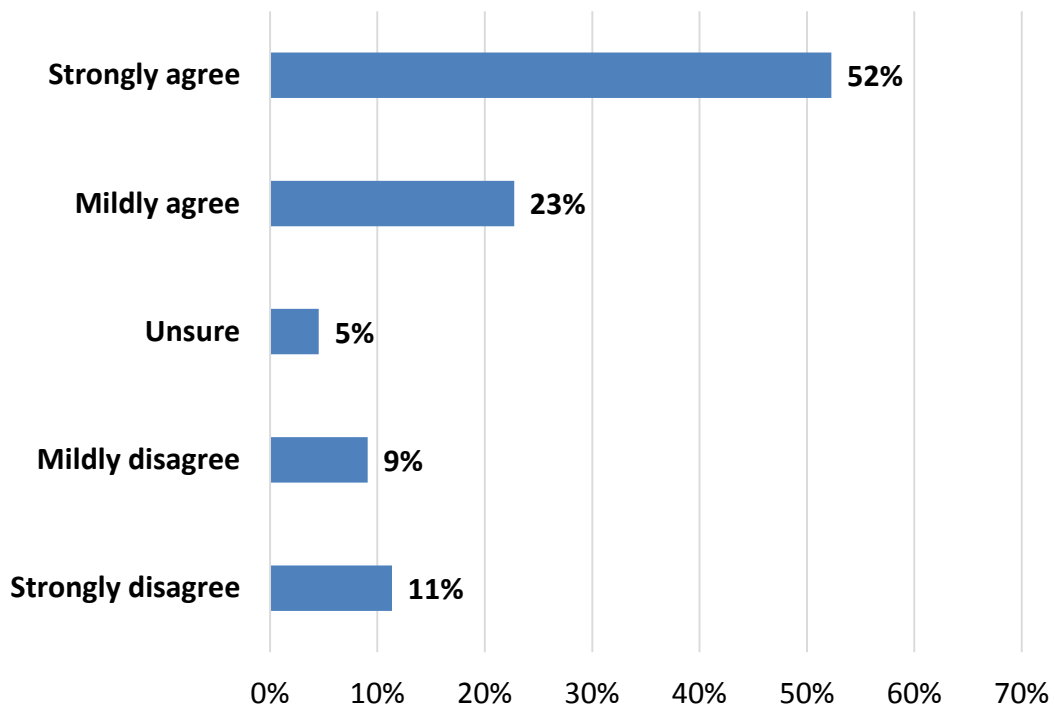




## Figure 1c

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

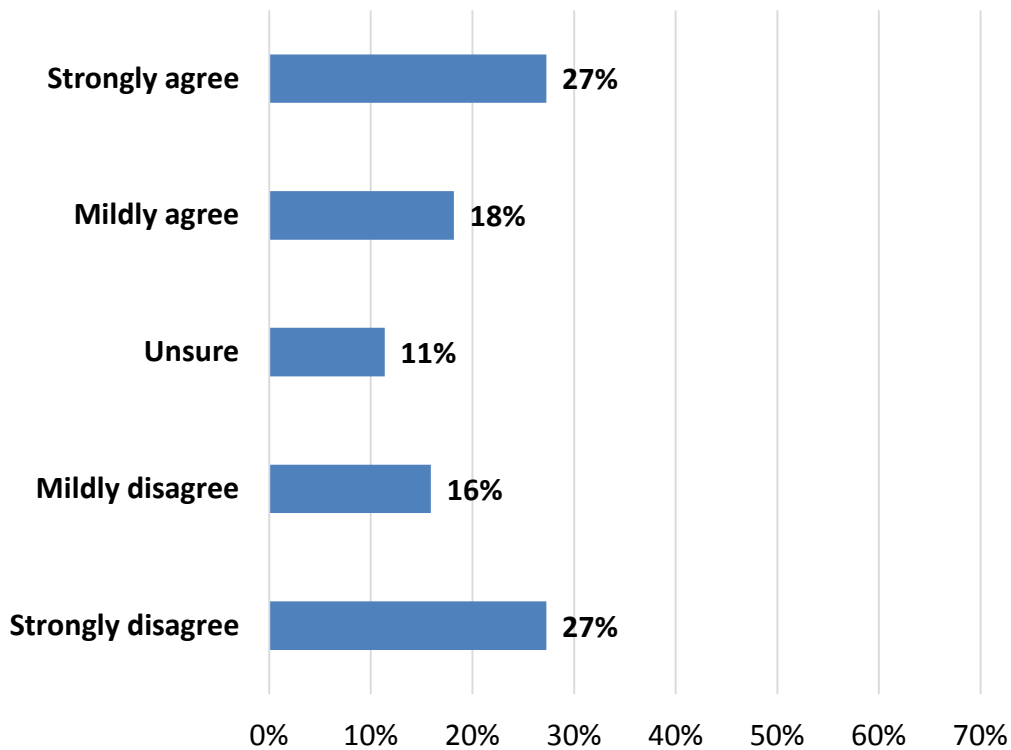
(n = 44)



**Figure 1d**

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

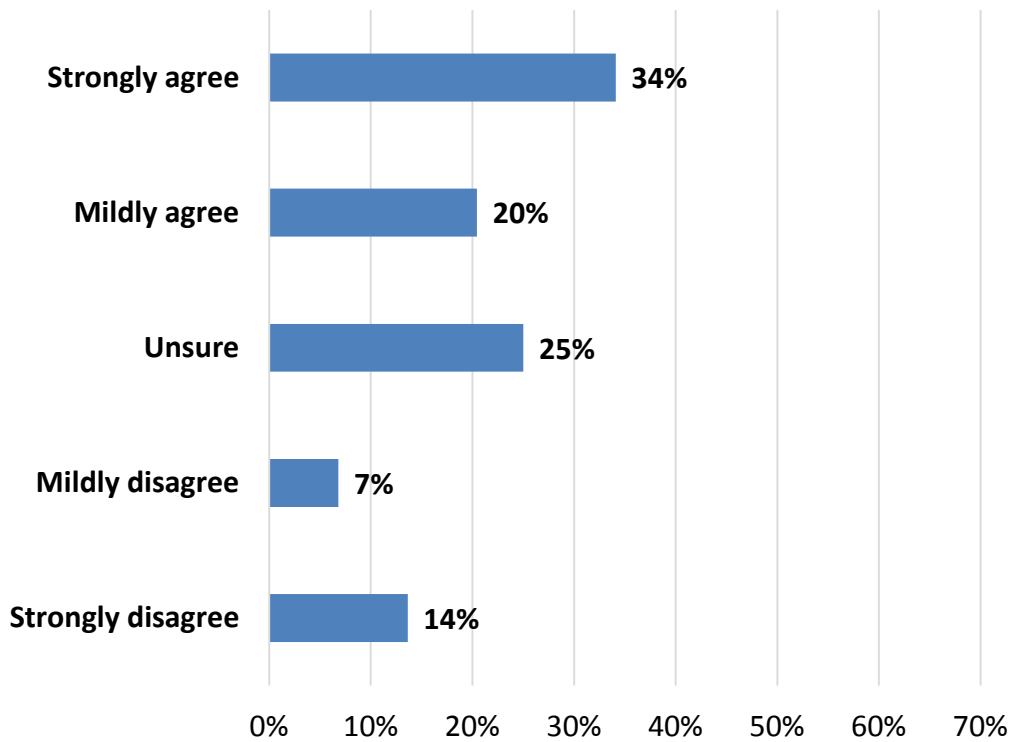
(n = 44)



## Figure 1e

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

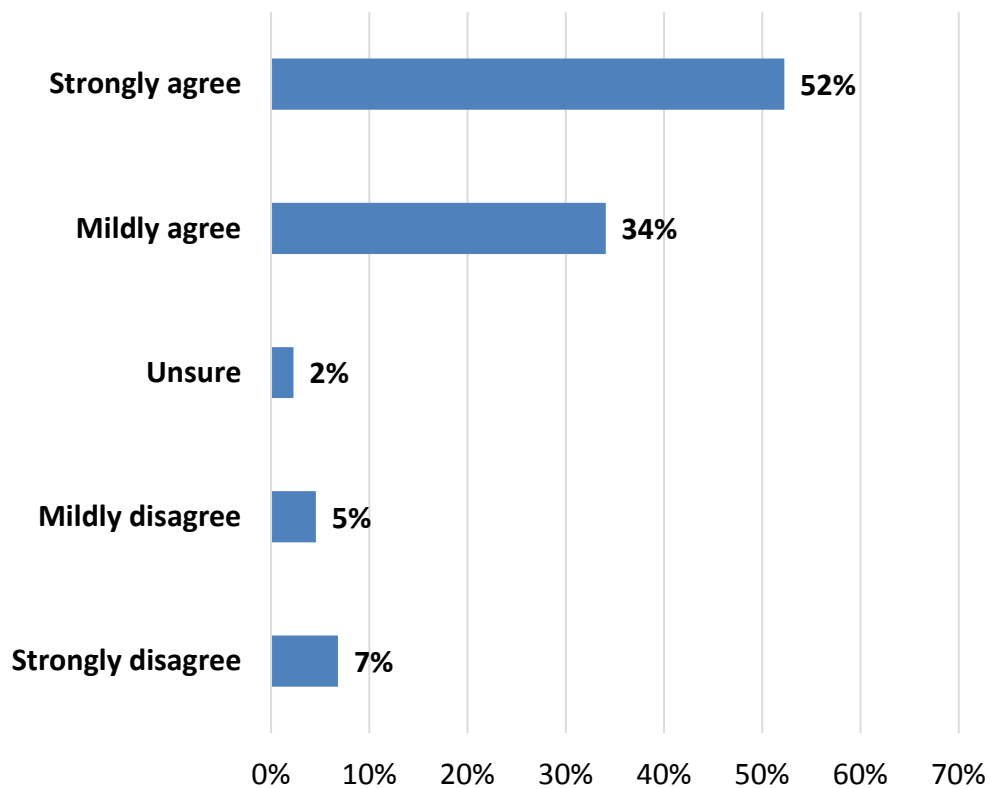
(n = 44)



**Figure 1f**

The oil and gas industry must adopt and use more environmentally-friendly drilling practices in the Eagle Ford Shale.

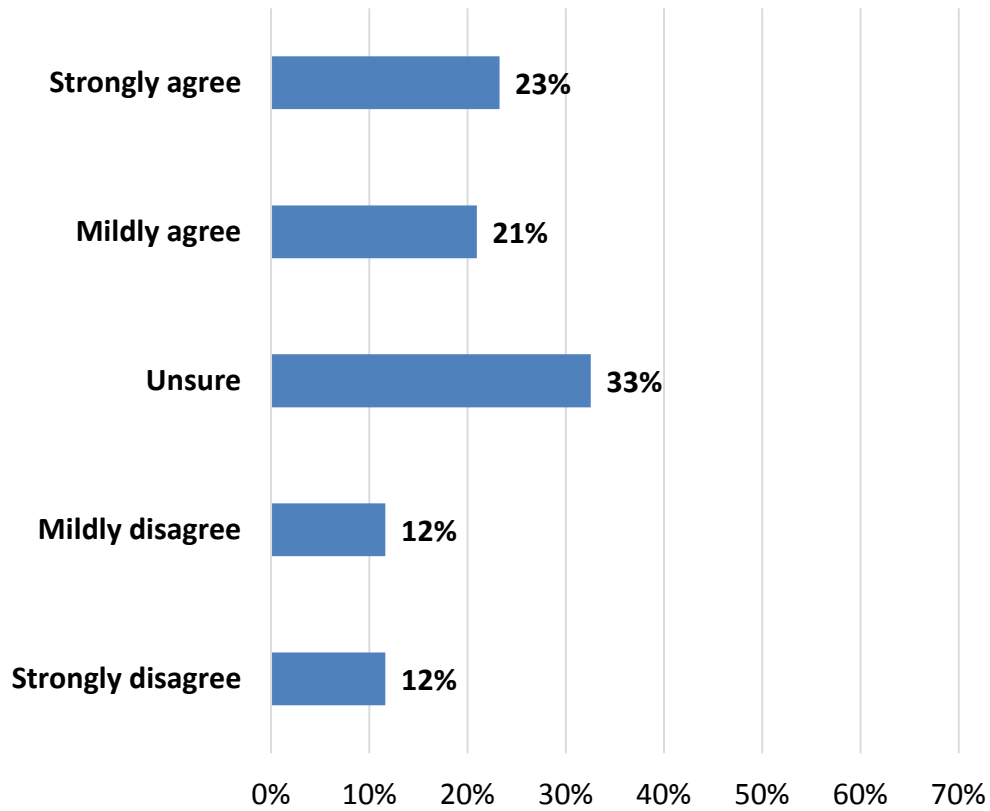
(n = 44)



## Figure 1g

Too little attention is being paid to the social costs of oil and gas development in the Eagle Ford Shale.

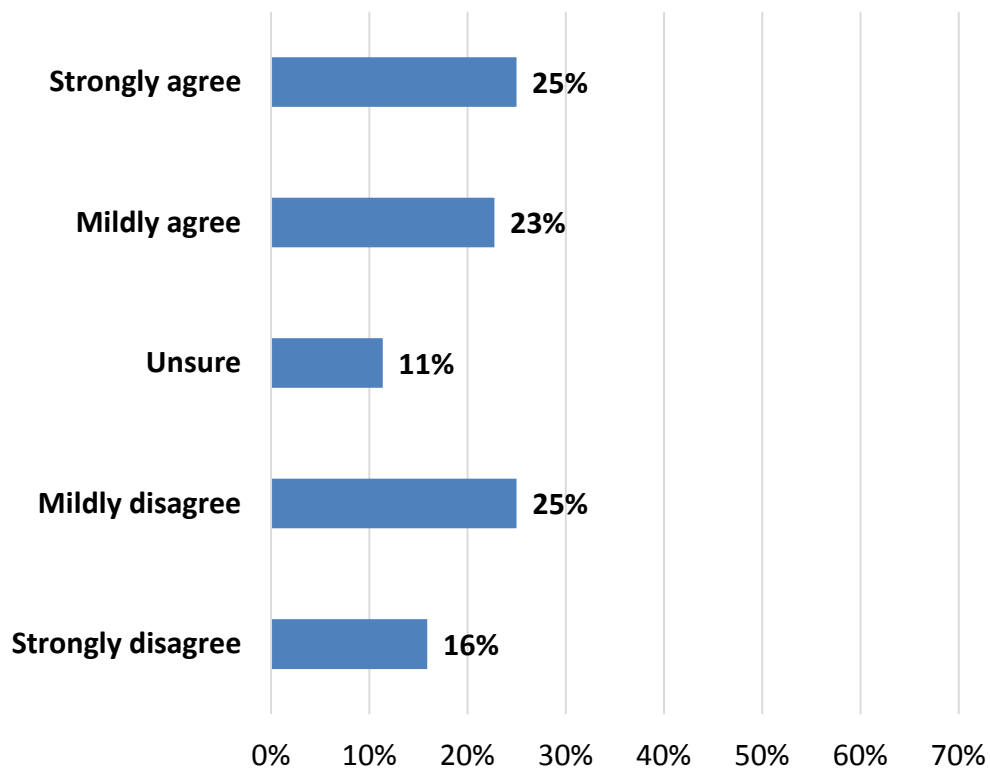
(n = 43)



**Figure 1h**

The oil and gas industry has little interest in our natural environment.

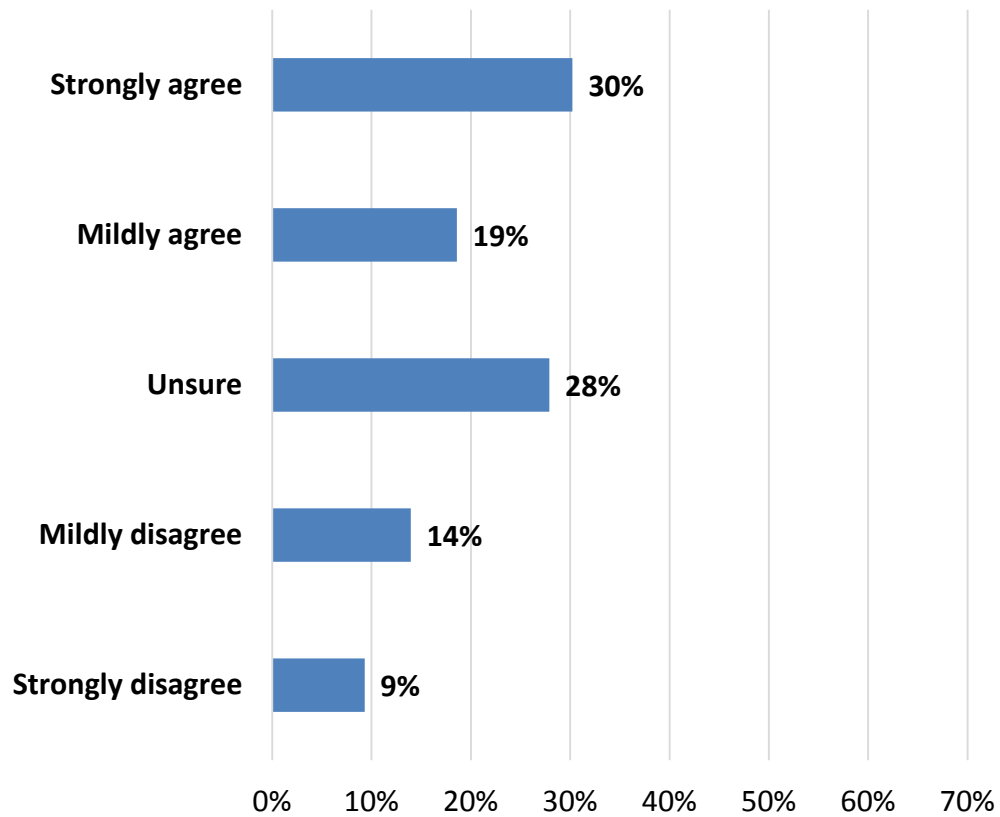
(n = 44)



**Figure 1i**

Oil and gas companies in the Eagle Ford Shale will do only what's required by law.

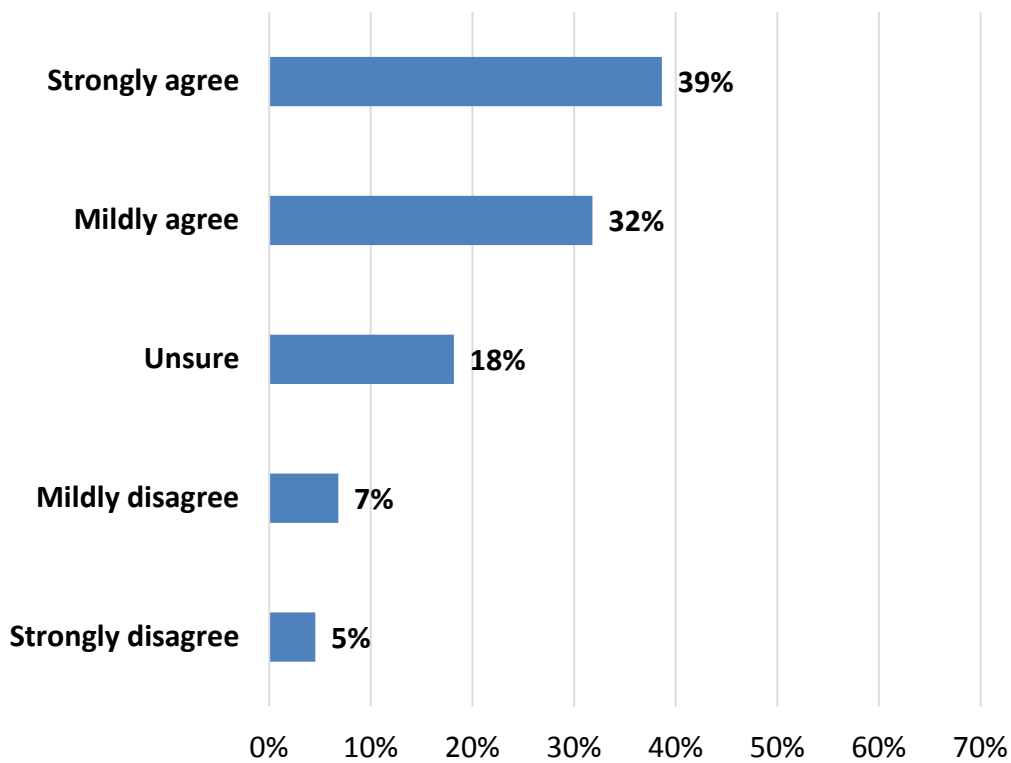
(n = 43)



**Figure 1j**

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

(n = 44)

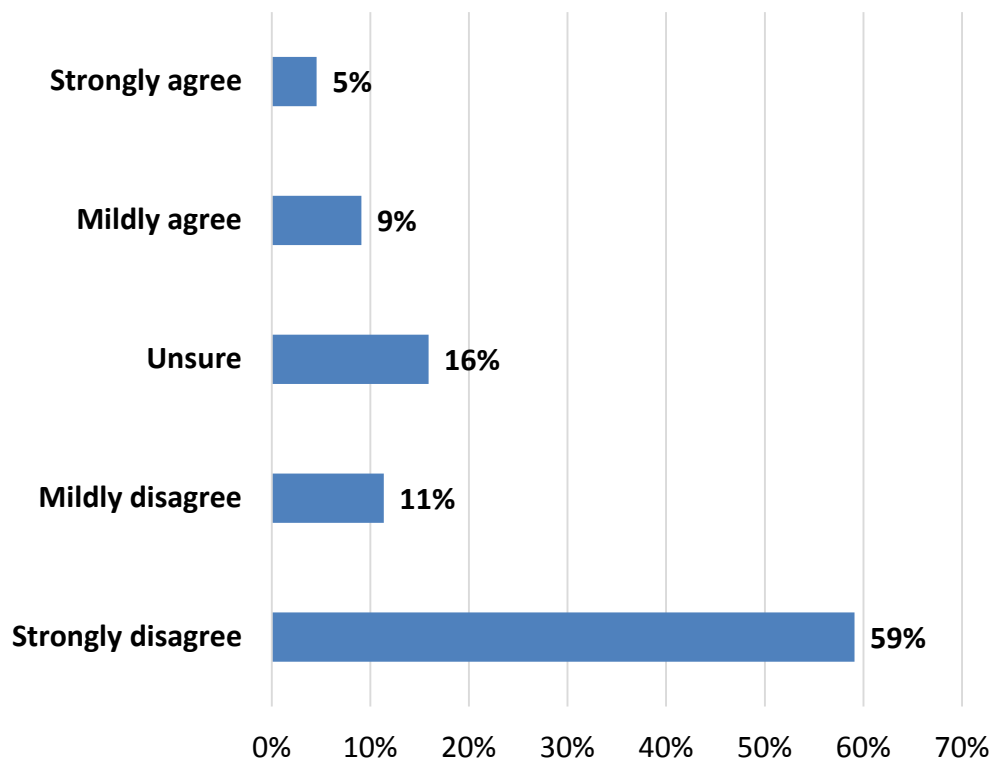




## Figure 1k

People who object to oil and gas development in the Eagle Ford Shale should move someplace else.

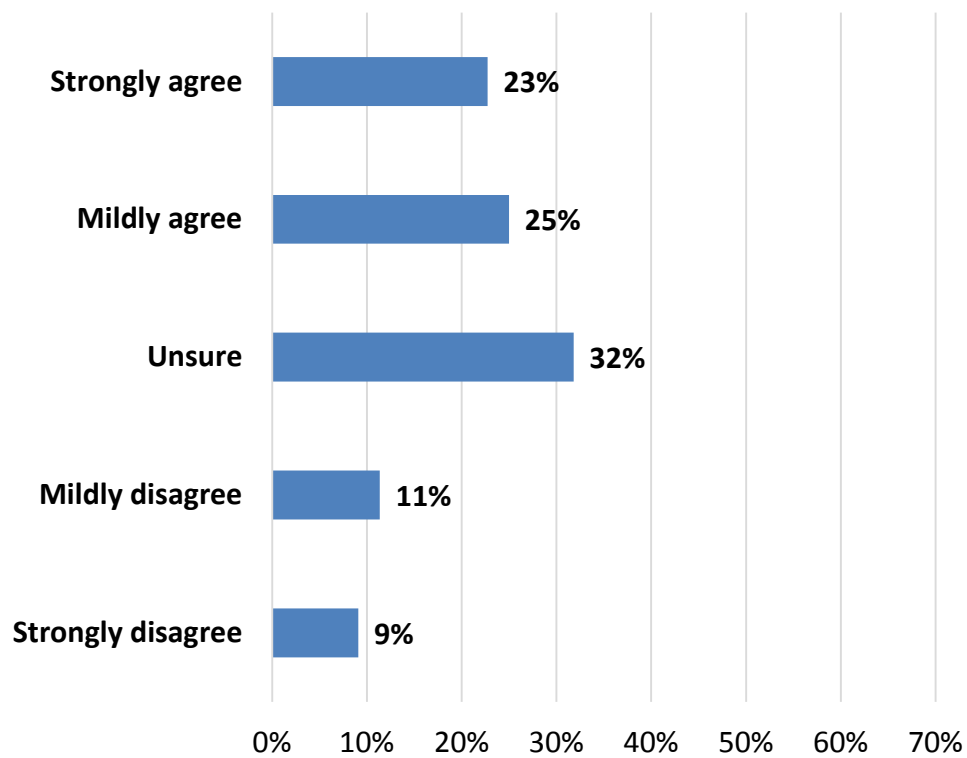
(n = 44)



**Figure 11**

**Oil and gas industry operators in the Eagle Ford Shale are too politically powerful.**

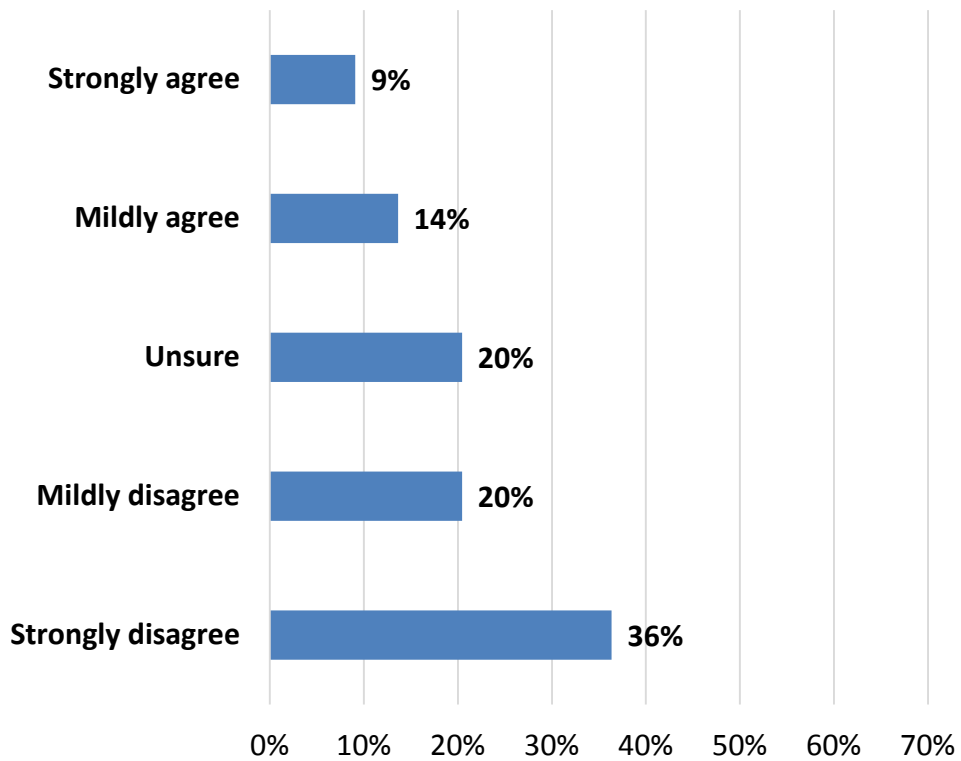
(n = 44)



**Figure 1m**

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

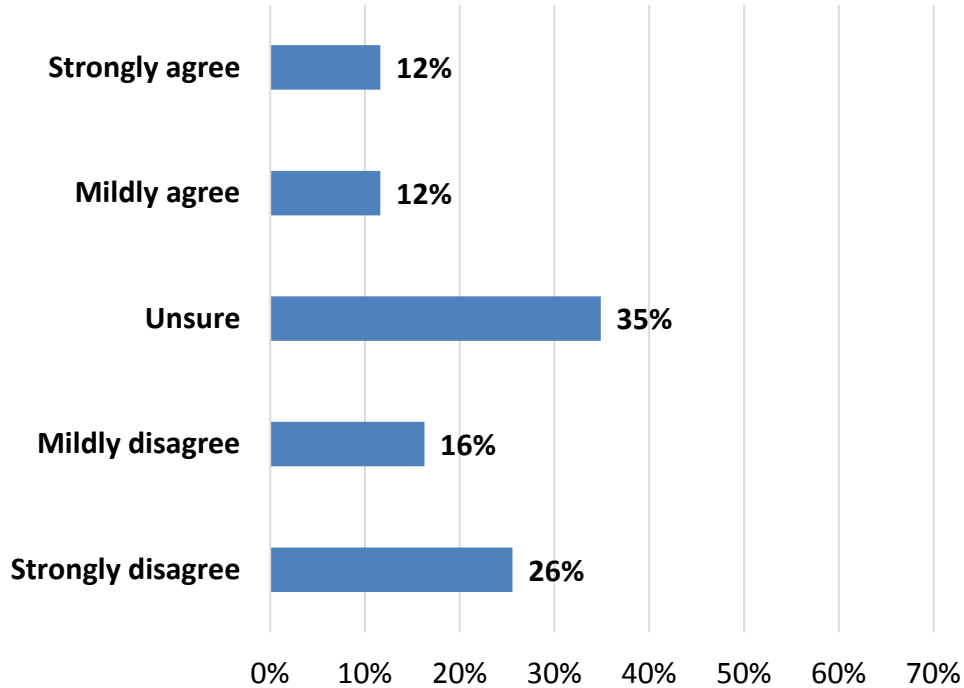
(n = 44)



## Figure 1n

We already know enough about the potential impacts of oil and natural gas extraction to speed up development in the Eagle Ford Shale.

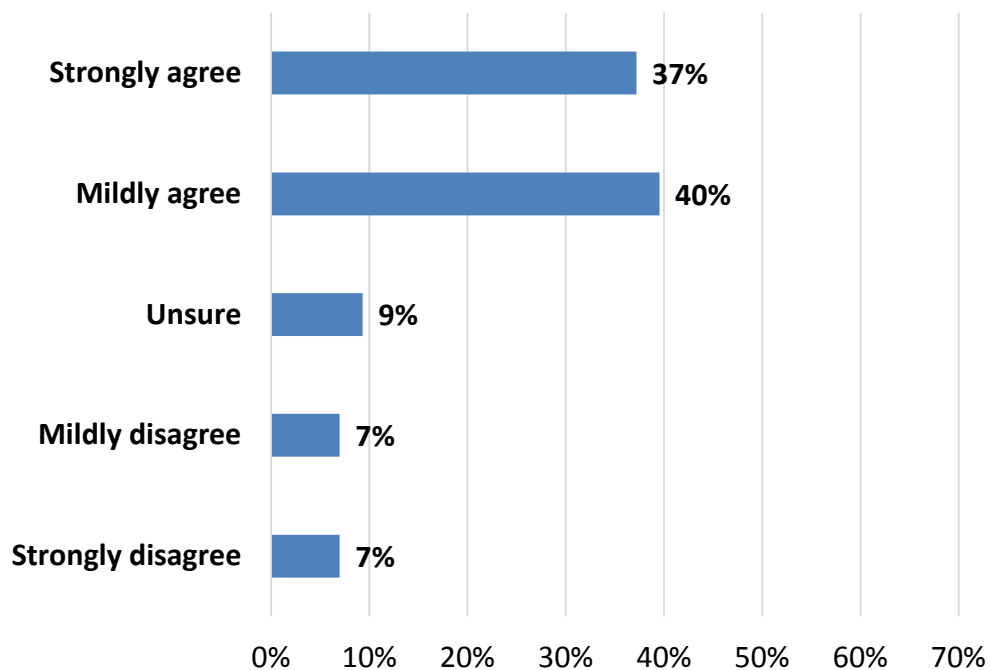
(n = 43)



## Figure 1o

I worry that there will be some sort of catastrophic accident involving oil and natural gas extraction in the Eagle Ford Shale.

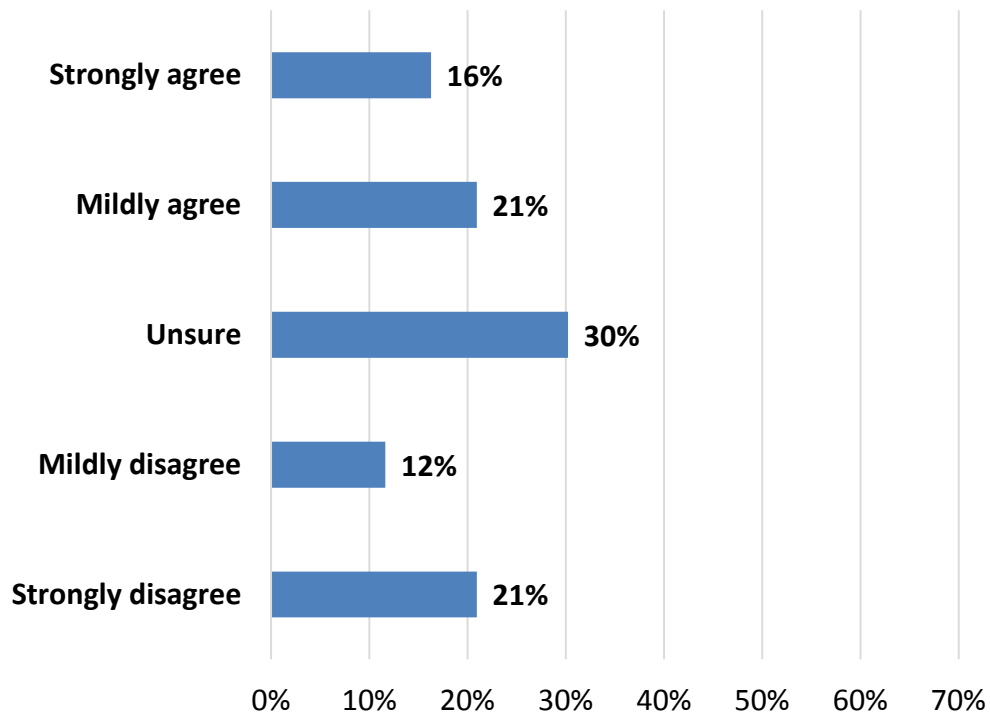
(n = 43)



## Figure 1p

Any negative impacts of oil and natural gas extraction in the Eagle Ford Shale can be fixed.

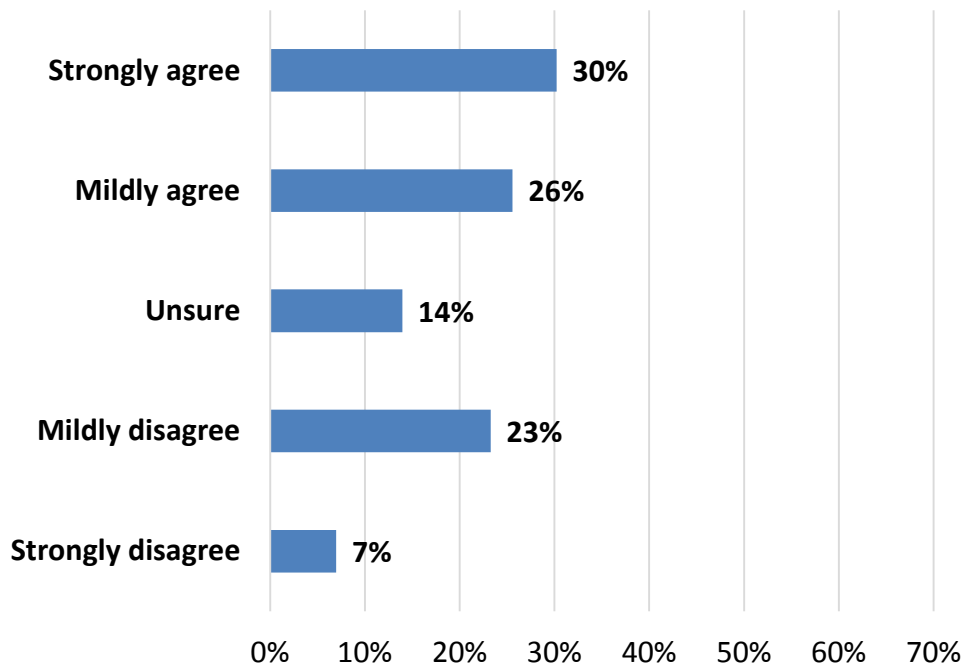
(n = 43)



**Figure 1q**

Continued development of oil and natural gas in the Eagle Ford Shale will create long lasting environmental problems.

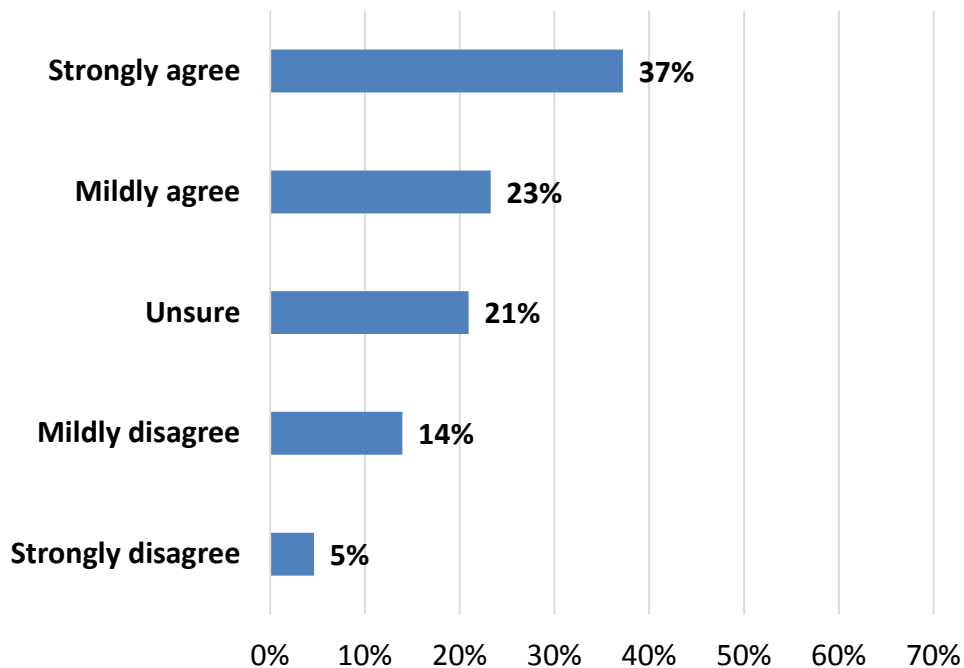
(n = 43)



**Figure 1r**

Extraction of oil and gas from shale reservoirs, such as in the Eagle Ford, should be encouraged to decrease our reliance on imported energy sources.

(n = 43)

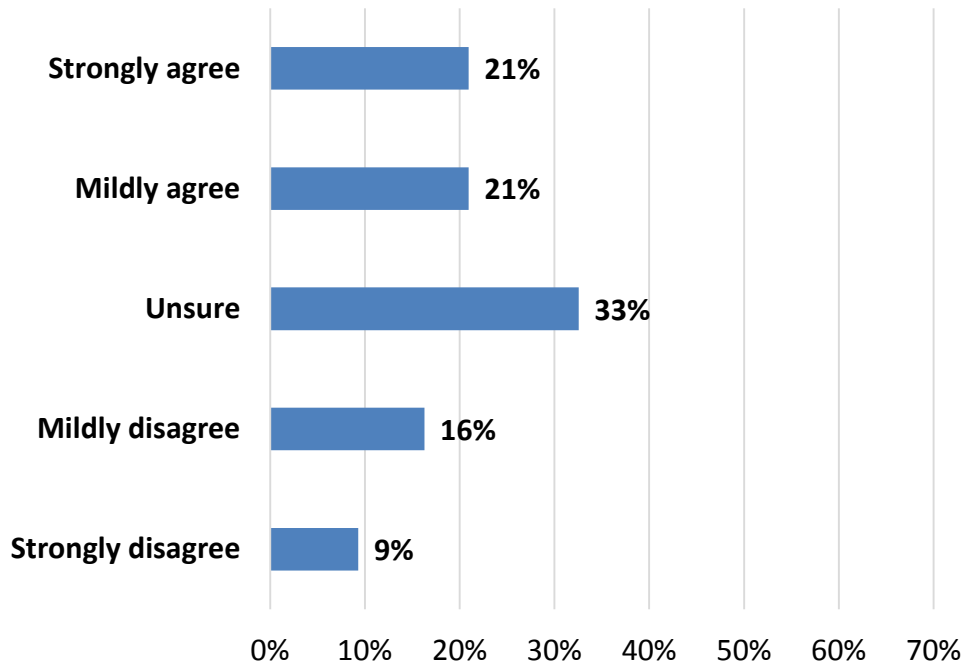




## Figure 1s

Continued development of oil and natural gas in the Eagle Ford Shale will create long lasting social problems.

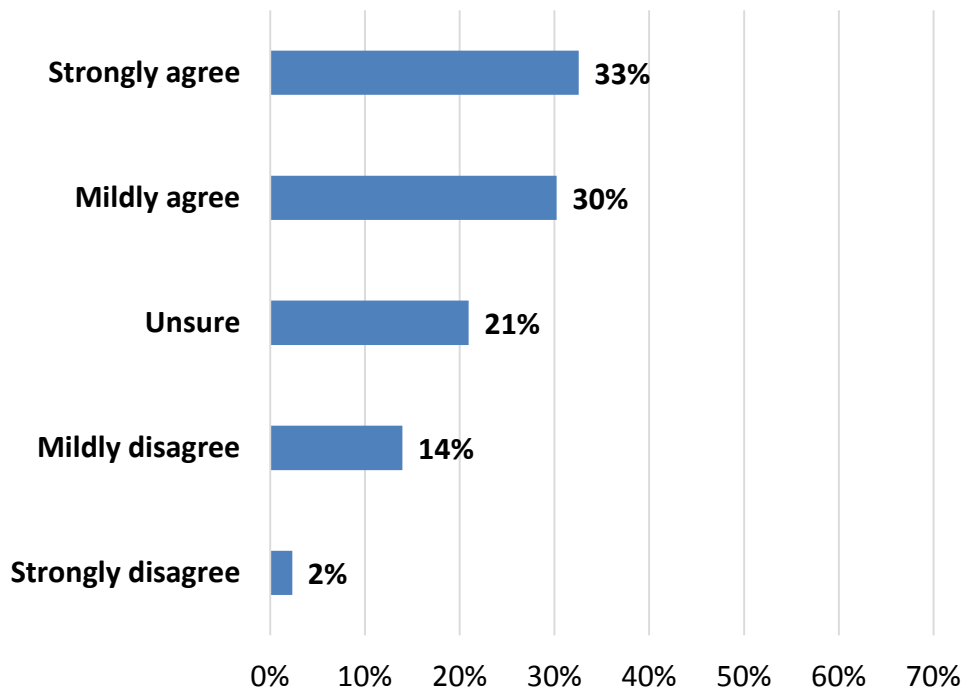
(n = 43)



**Figure 1t**

The oil and gas industry will provide economic opportunities that will help keep our children in south Texas.

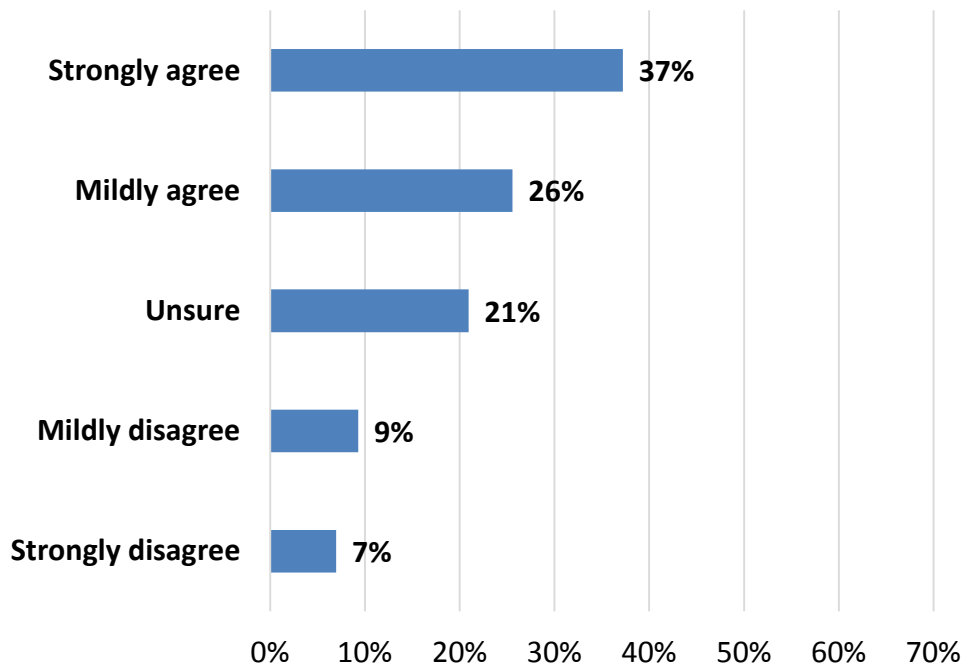
(n = 43)



**Figure 1u**

Continued development of oil and gas in the Eagle Ford Shale makes me optimistic about the future of south Texas.

(n = 43)



## **Section II**

# **Potential Problems in La Salle County**

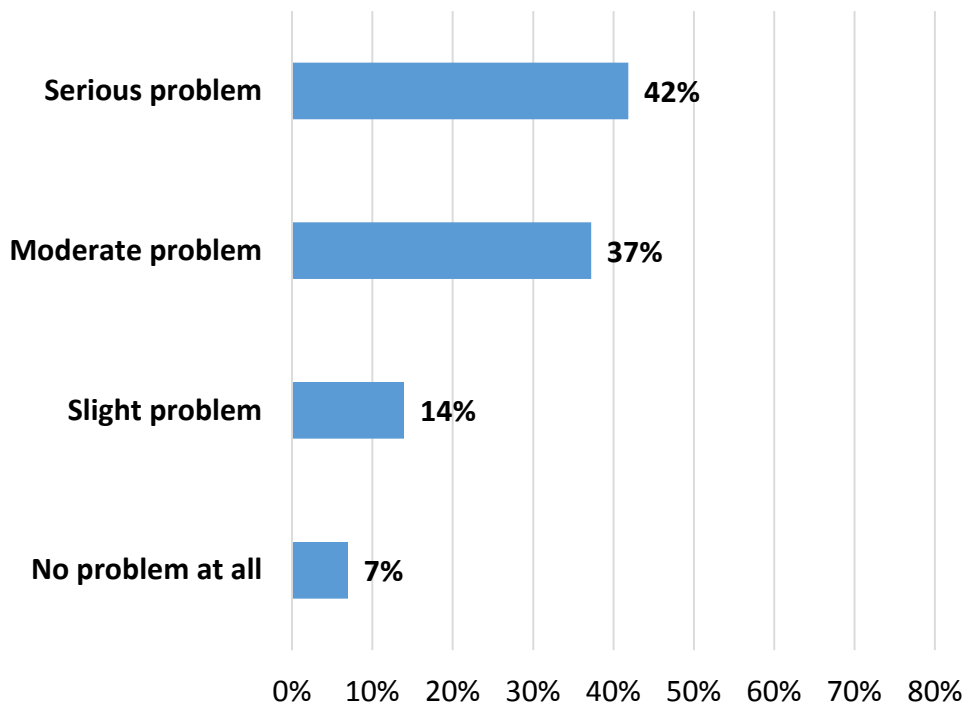
This section deals with respondents' perceptions of the potential problems in La Salle County which may or may not be associated with the continued development of oil and natural gas. Survey respondents were presented with 24 issues which may or may not be problems in La Salle County. Respondents were asked to indicate whether they believed each issue currently is "no problem at all," a "slight problem," a "moderate problem," or a "serious problem." Respondents were then asked to indicate whether the seriousness of the problem is "getting better," "staying the same," or "getting worse" with the continued development of oil and natural gas. The results are summarized below.

Figures 2a through 25a illustrate the perceived problematic extent of the issue today. Figures 2b to 25b illustrate the perceived seriousness of the problem with the continued development of oil and natural gas.

For purposes of presentation, the issues were ranked from the perceived "most serious" to the "least serious" (see the reported mean scores and coding notation).

## Figure 2a

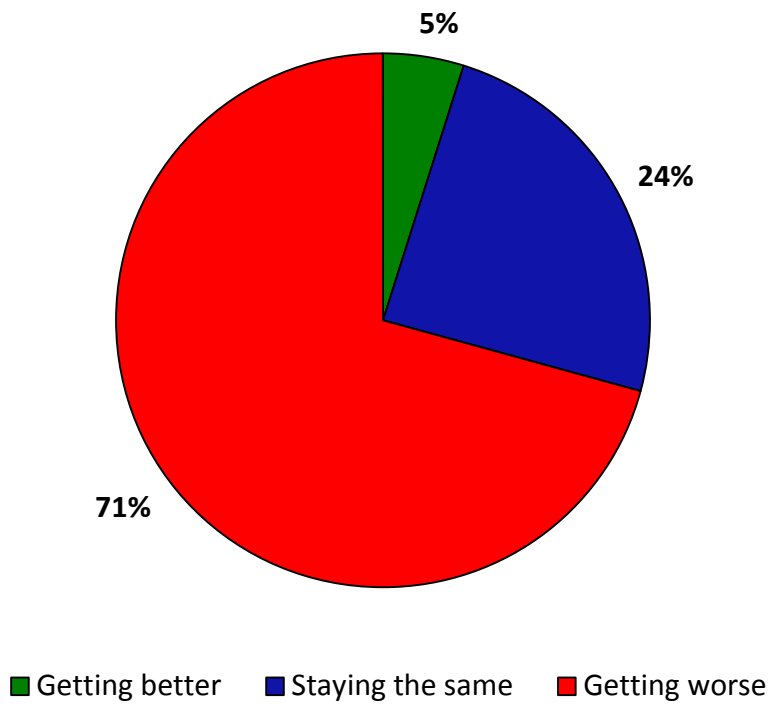
Issue: Illegal drugs  
(n = 43)



<b>Mean</b>	<b>3.14</b>
<b>Standard deviation</b>	<b>0.91</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

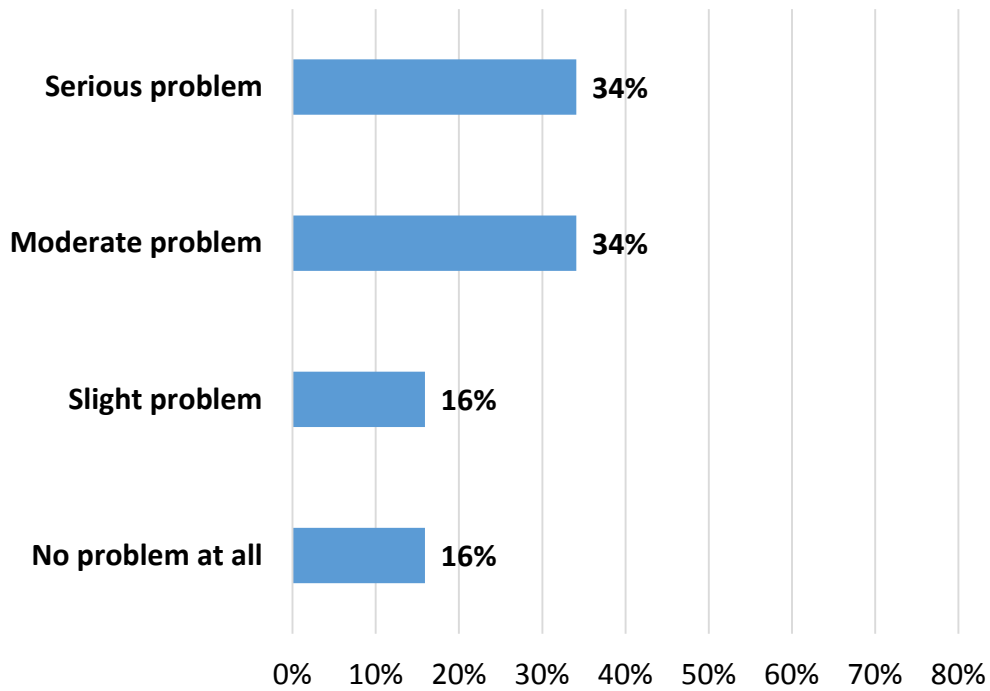
## Figure 2b

Because of the development of oil and natural gas, Illegal drugs are:  
(n = 41)



## Figure 3a

Issue: Availability of good jobs  
(n = 44)

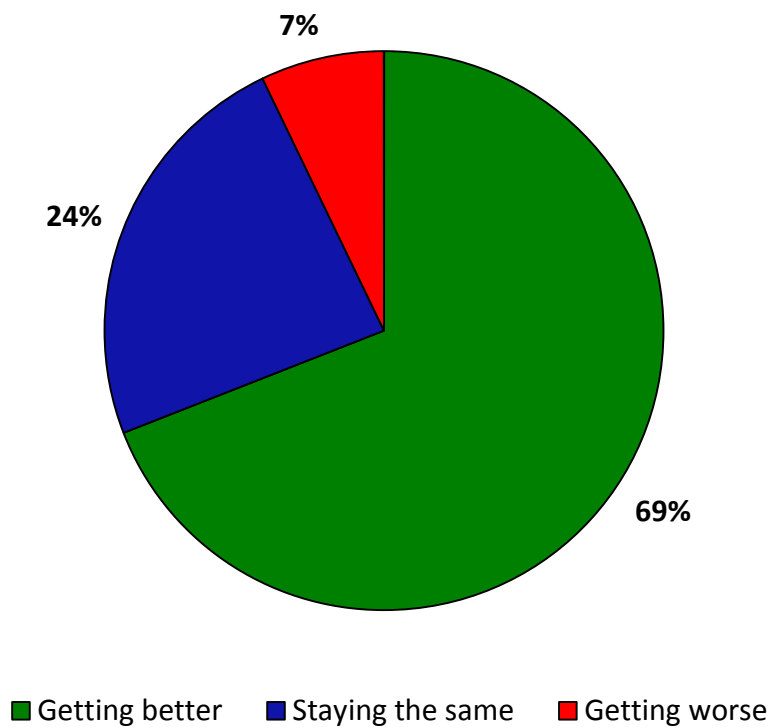


<b>Mean</b>	<b>2.86</b>
<b>Standard deviation</b>	<b>1.07</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 3b

Because of the development of oil and natural gas, availability of good jobs is:

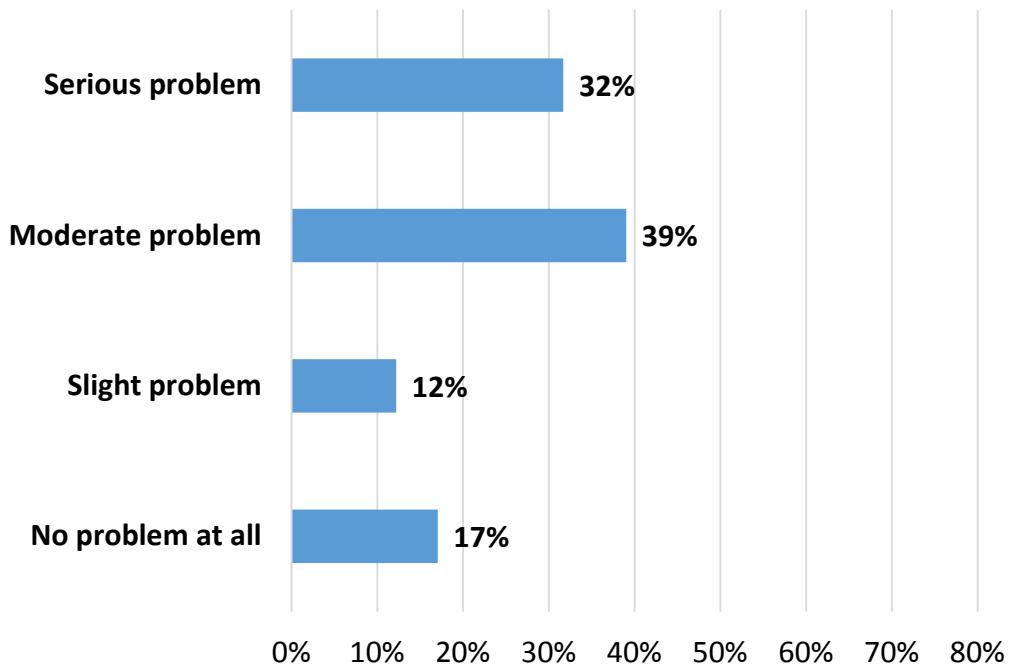
(n = 42)





## Figure 4a

Issue: Young people leaving community after high school  
(n = 41)

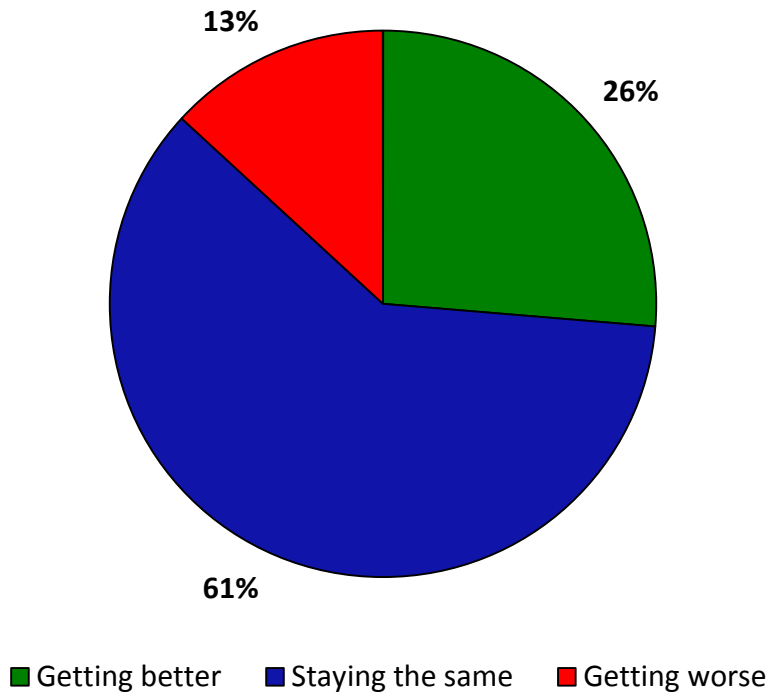


<b>Mean</b>	<b>2.85</b>
<b>Standard deviation</b>	<b>1.06</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 4b

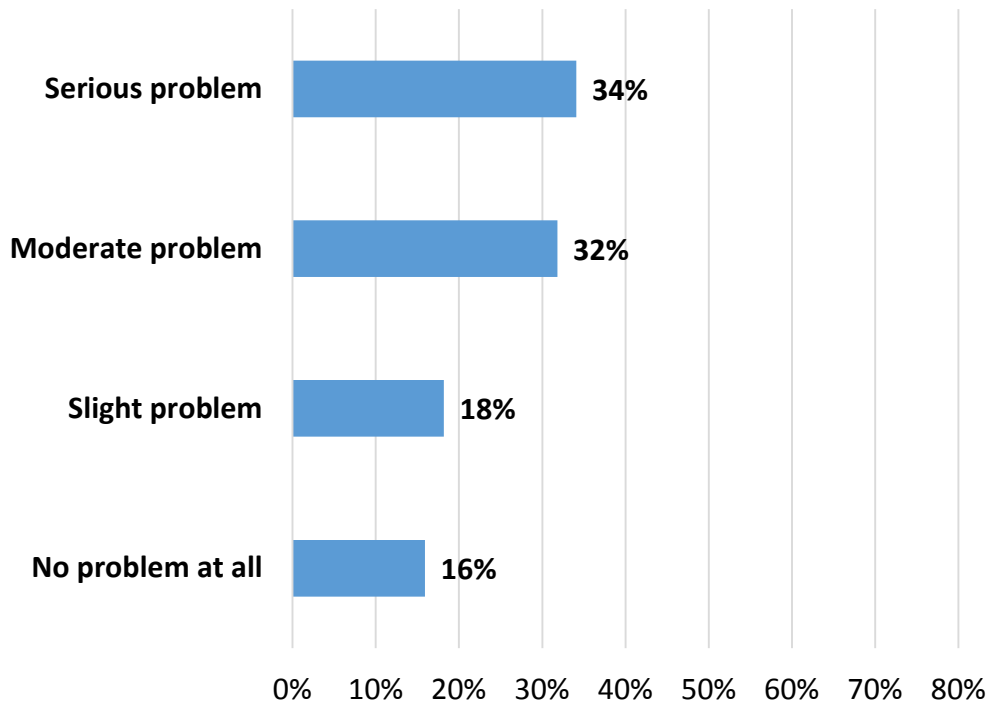
Because of the development of oil and natural gas, young people leaving community after high school is:

(n = 38)



## Figure 5a

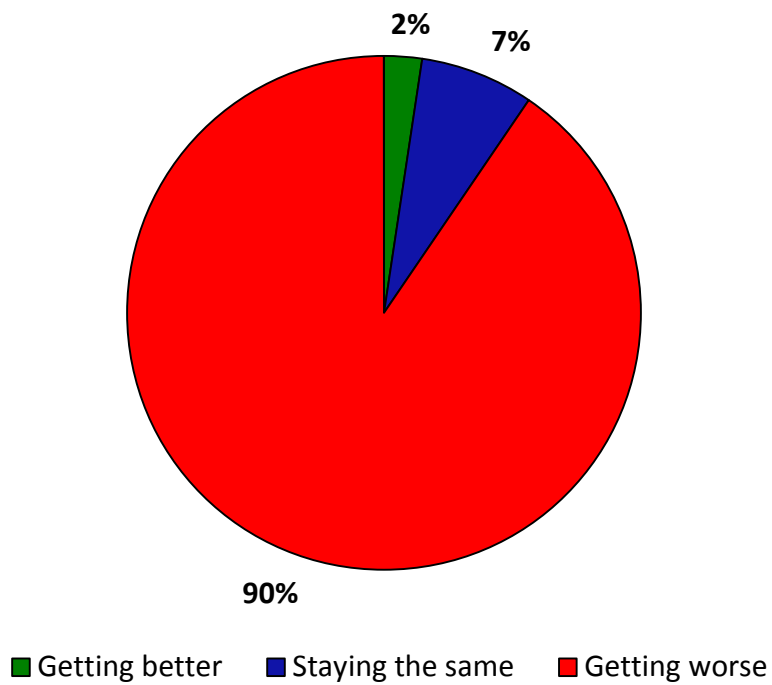
Issue: Cost of food  
(n = 44)



<b>Mean</b>	<b>2.84</b>
<b>Standard deviation</b>	<b>1.08</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 5b

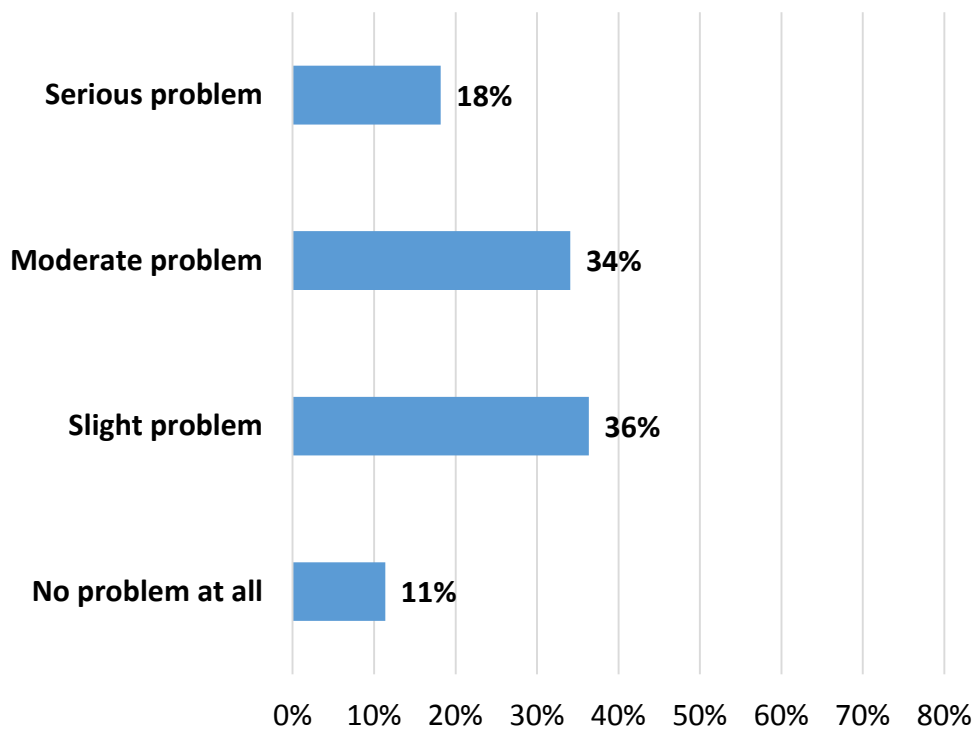
Because of the development of oil and natural gas, cost of food is:  
(n = 42)



## Figure 6a

Issue: Violent crimes such as assault or domestic abuse

(n = 44)

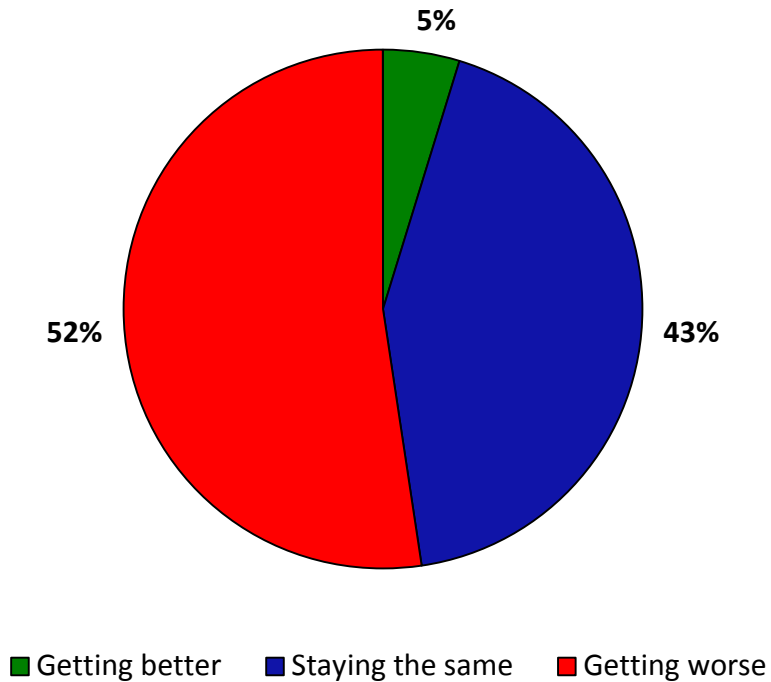


<b>Mean</b>	<b>2.59</b>
<b>Standard deviation</b>	<b>0.92</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 6b

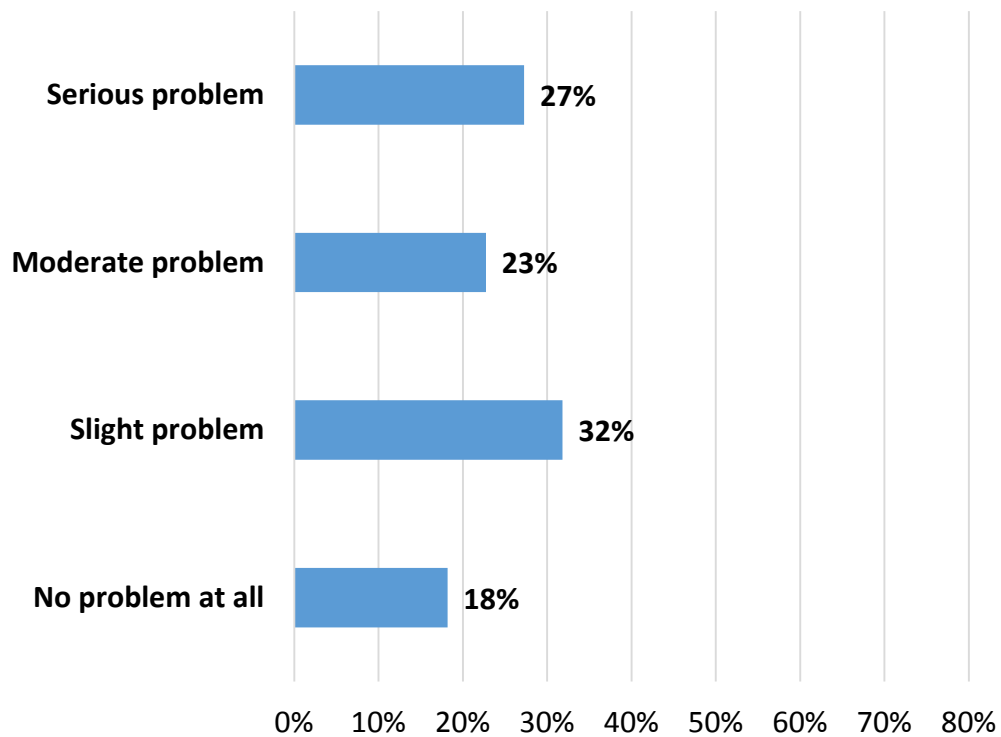
Because of the development of oil and natural gas, violent crimes such as assault or domestic abuse are:

(n = 42)



## Figure 7a

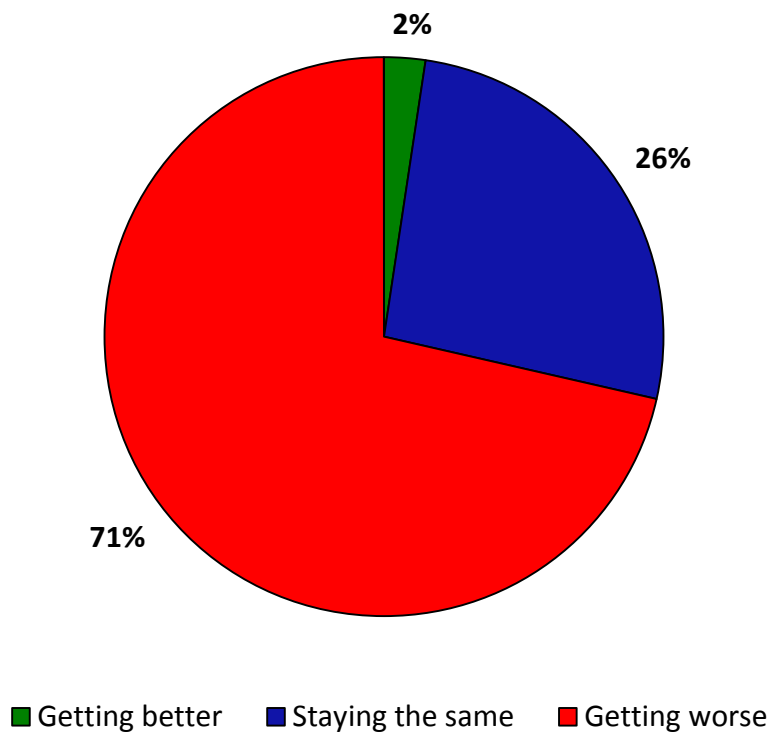
Issue: Illegal dumping  
(n = 44)



<b>Mean</b>	<b>2.59</b>
<b>Standard deviation</b>	<b>1.09</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 7b

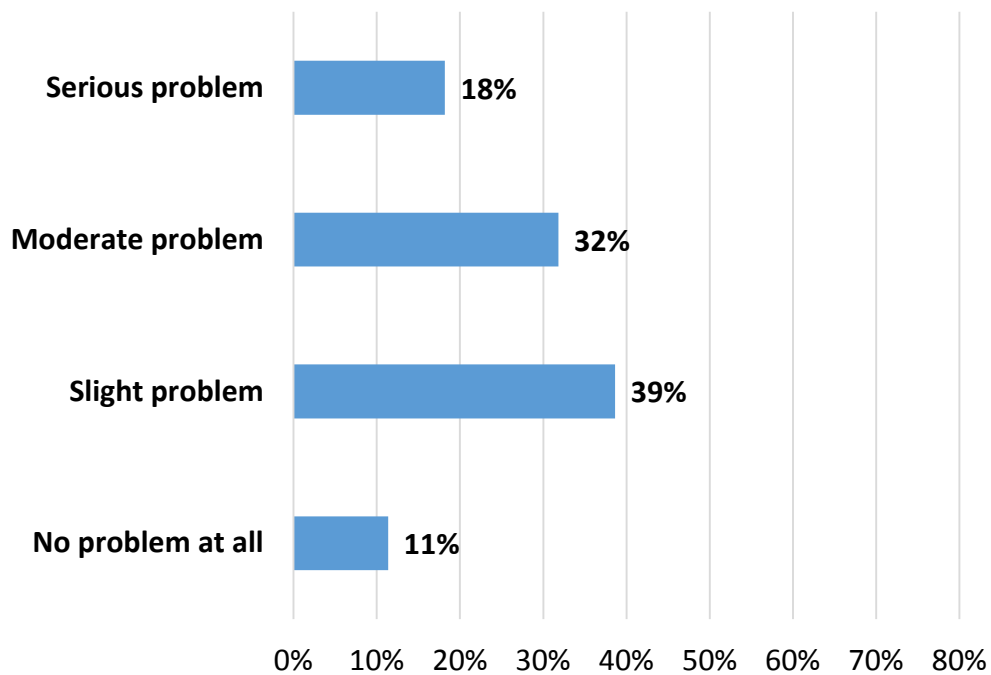
Because of the development of oil and natural gas, illegal dumping is:  
(n = 42)





## Figure 8a

Issue: Property crimes such as vandalism or theft  
(n = 44)

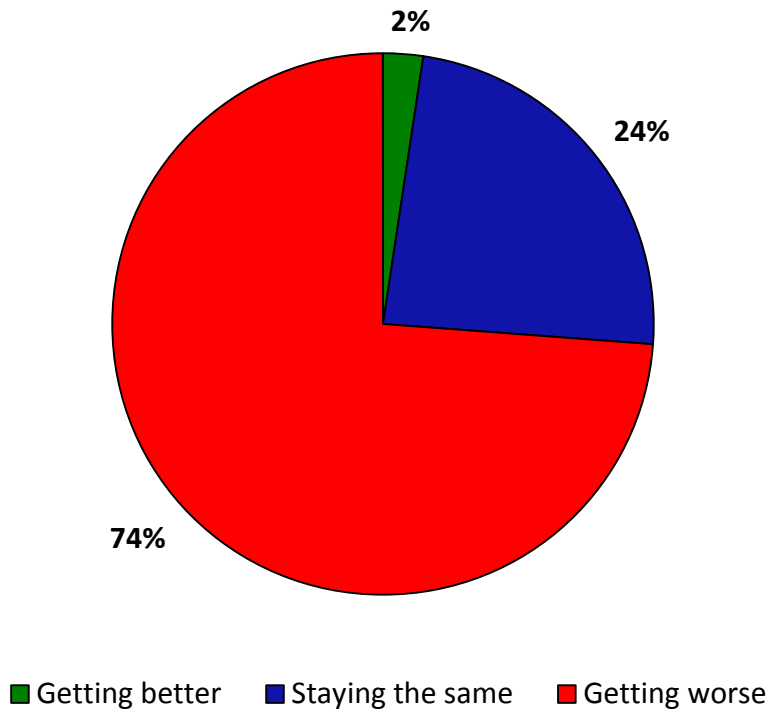


<b>Mean</b>	<b>2.57</b>
<b>Standard deviation</b>	<b>0.93</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 8b

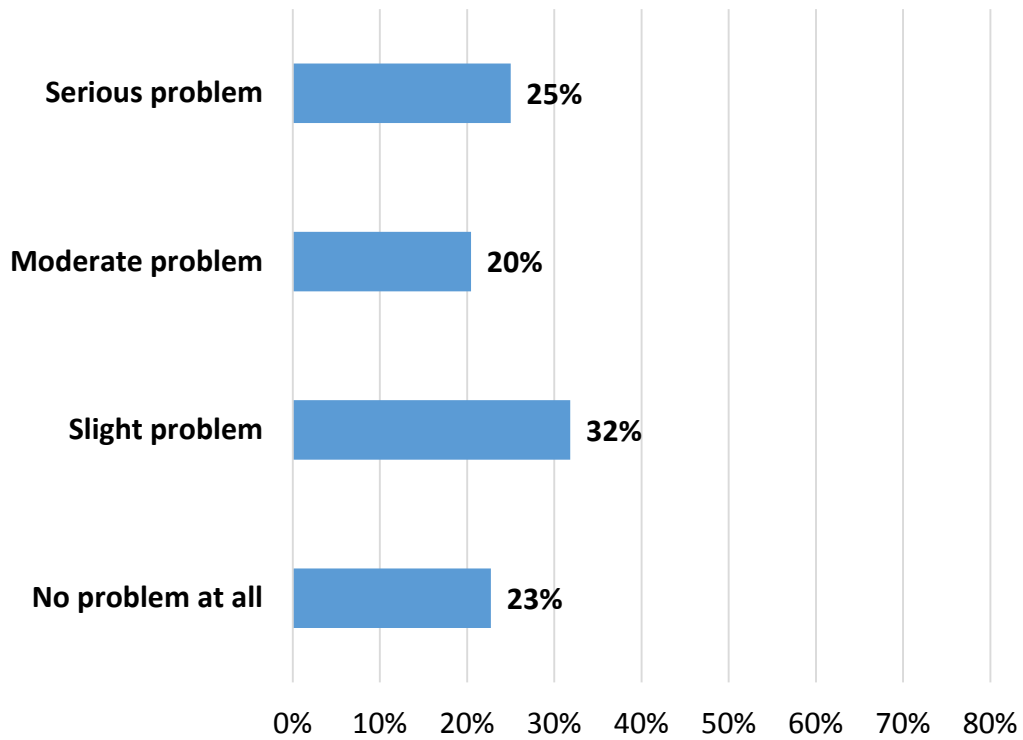
Because of the development of oil and natural gas, property crimes such as vandalism or theft

are:  
(n = 42)



## Figure 9a

Issue: Availability of affordable housing  
(n = 44)

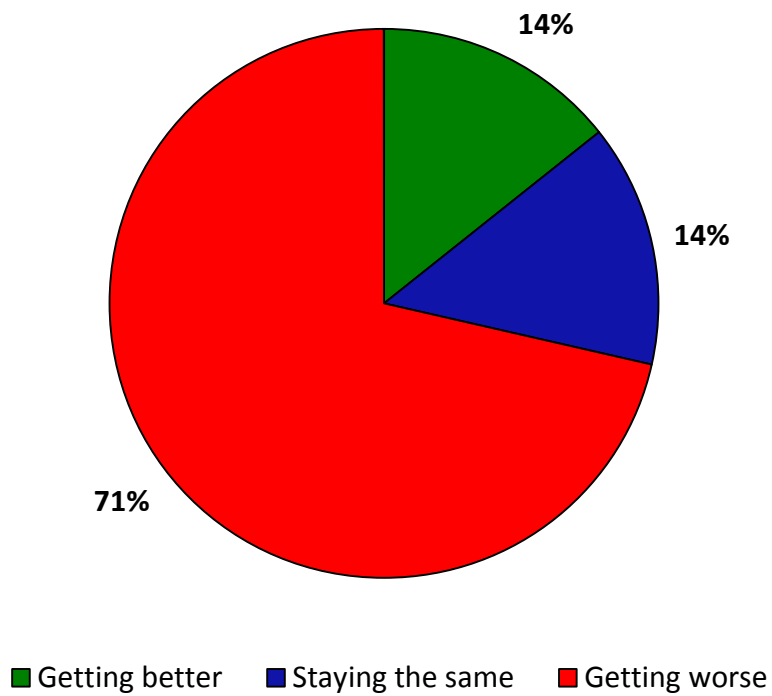


<b>Mean</b>	<b>2.48</b>
<b>Standard deviation</b>	<b>1.11</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 9b

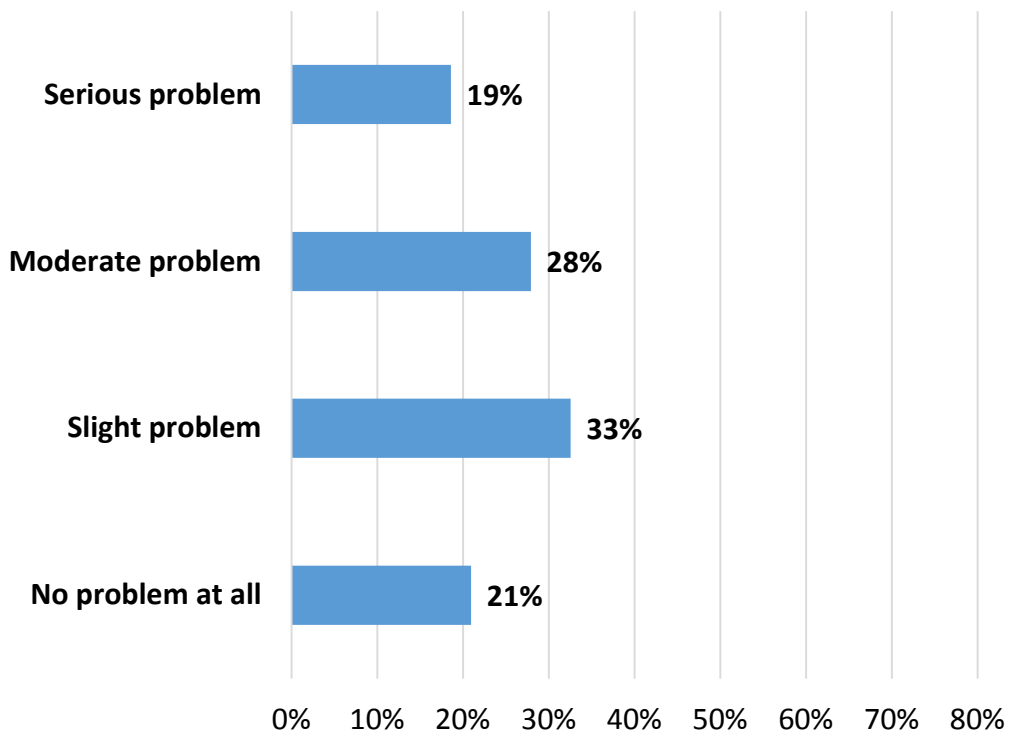
Because of the development of oil and natural gas, availability of affordable housing is:

(n = 42)



### Figure 10a

Issue: Trash on roadsides  
(n = 43)

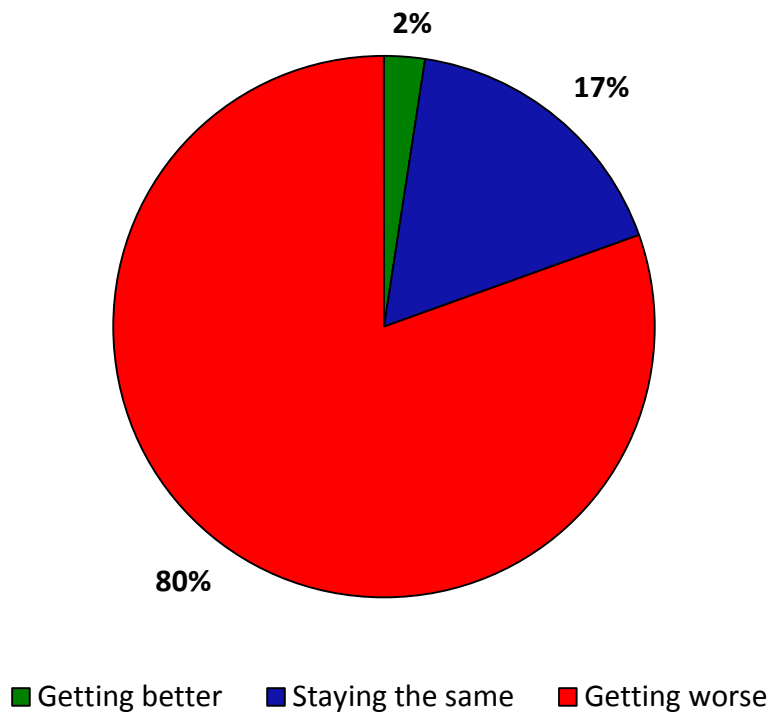


<b>Mean</b>	<b>2.44</b>
<b>Standard deviation</b>	<b>1.03</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 10b

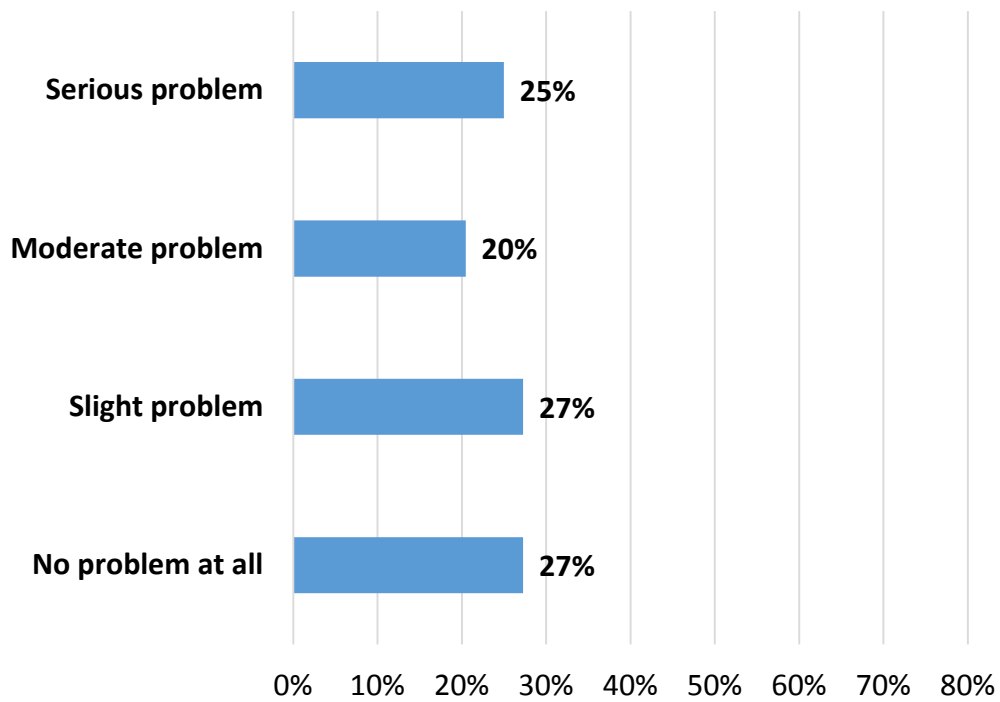
Because of the development of oil and natural gas, trash on roadsides is:

(n = 41)



## Figure 11a

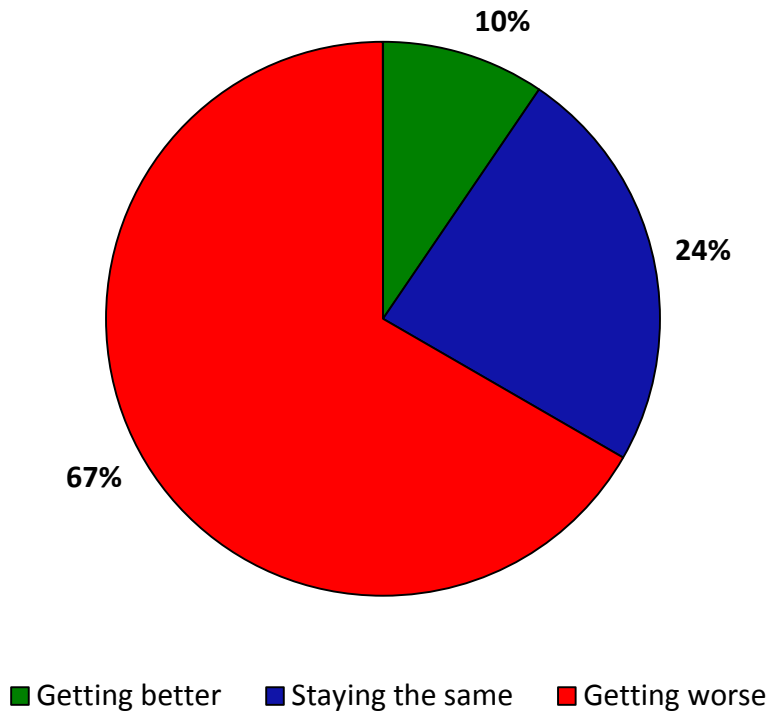
Issue: Local tax rates  
(n = 44)



<b>Mean</b>	<b>2.43</b>
<b>Standard deviation</b>	<b>1.15</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 11b

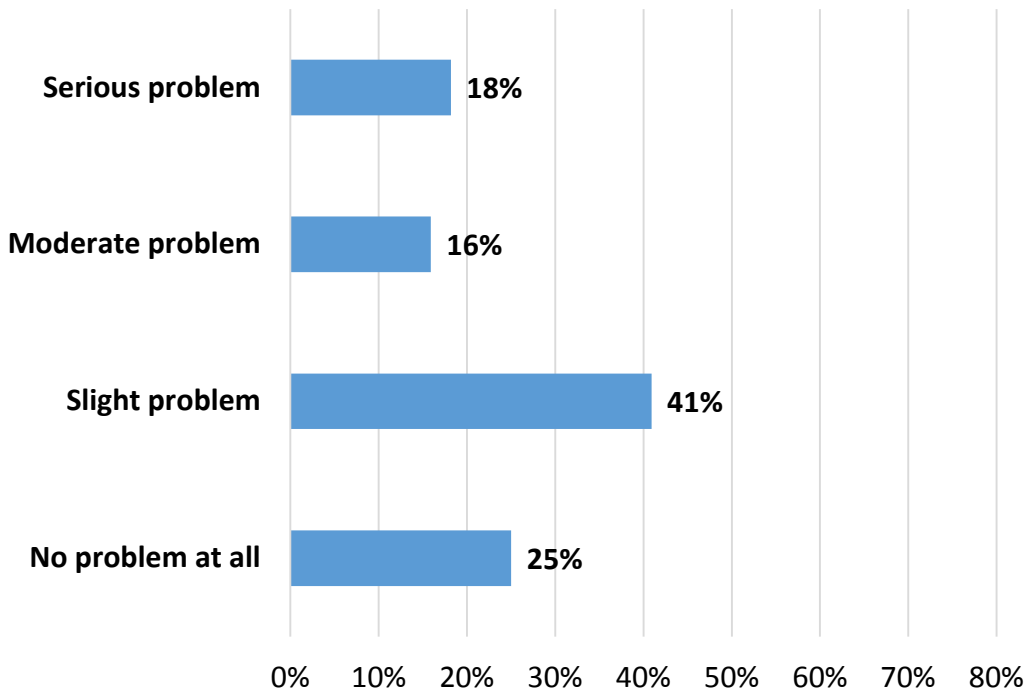
Because of the development of oil and natural gas, local tax rates are:  
(n = 42)





### Figure 12a

Issue: Traffic accidents  
(n = 44)

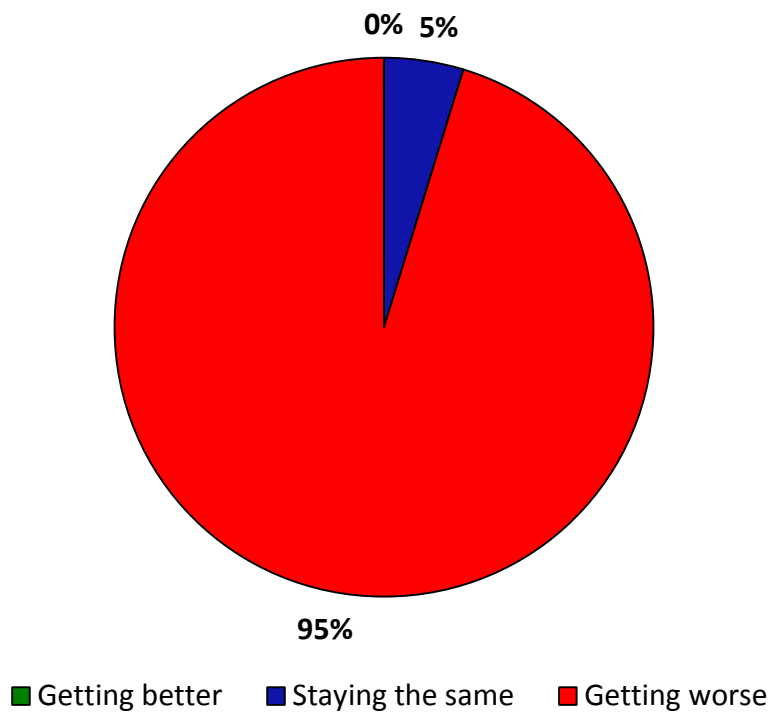


<b>Mean</b>	<b>2.27</b>
<b>Standard deviation</b>	<b>1.04</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 12b

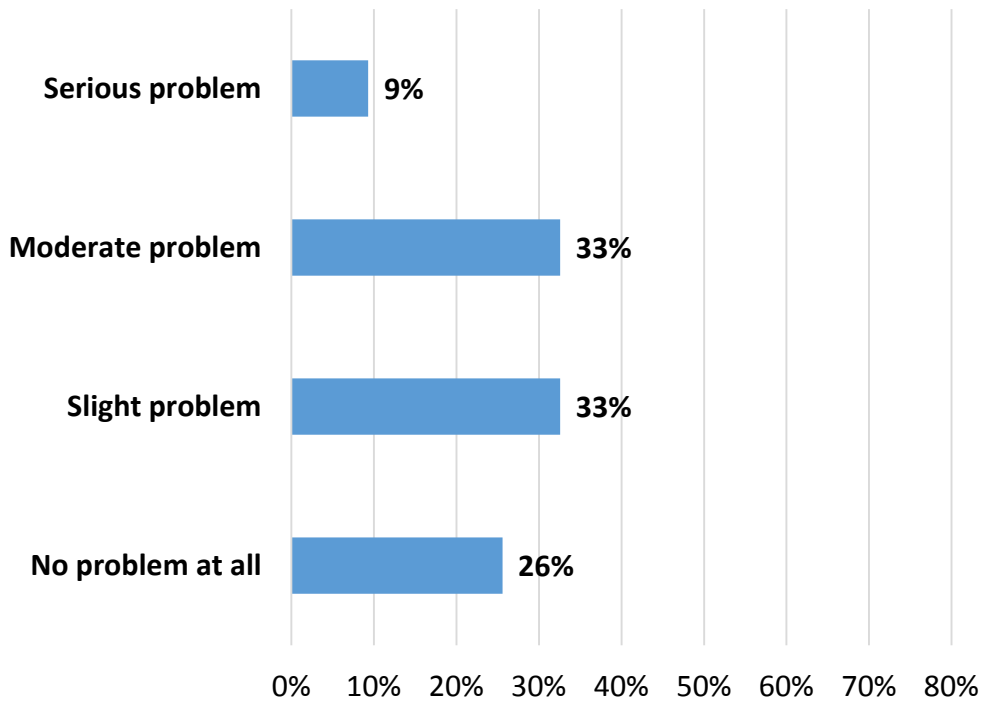
Because of the development of oil and natural gas, traffic accidents are:

(n = 42)



### Figure 13a

Issue: Spending in local businesses  
(n = 43)

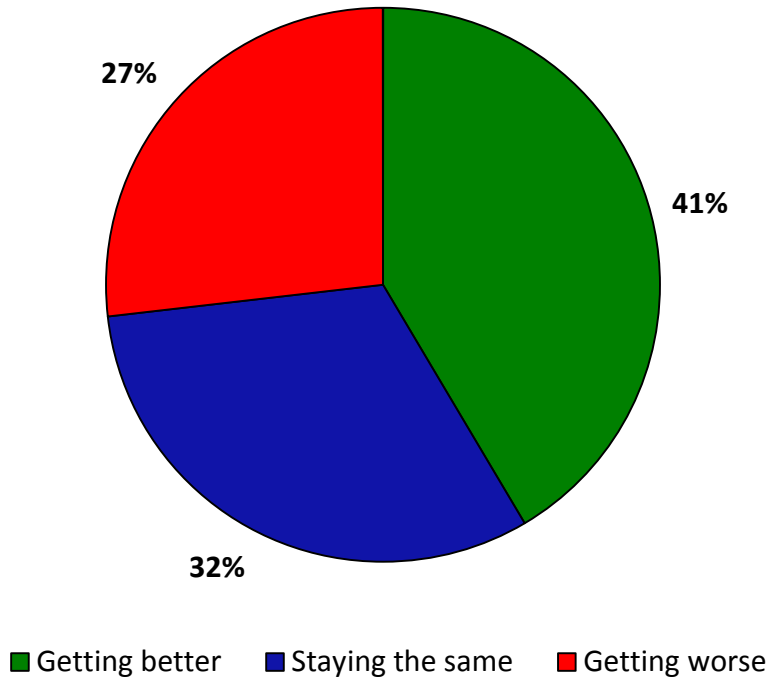


<b>Mean</b>	<b>2.26</b>
<b>Standard deviation</b>	<b>0.95</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 13b

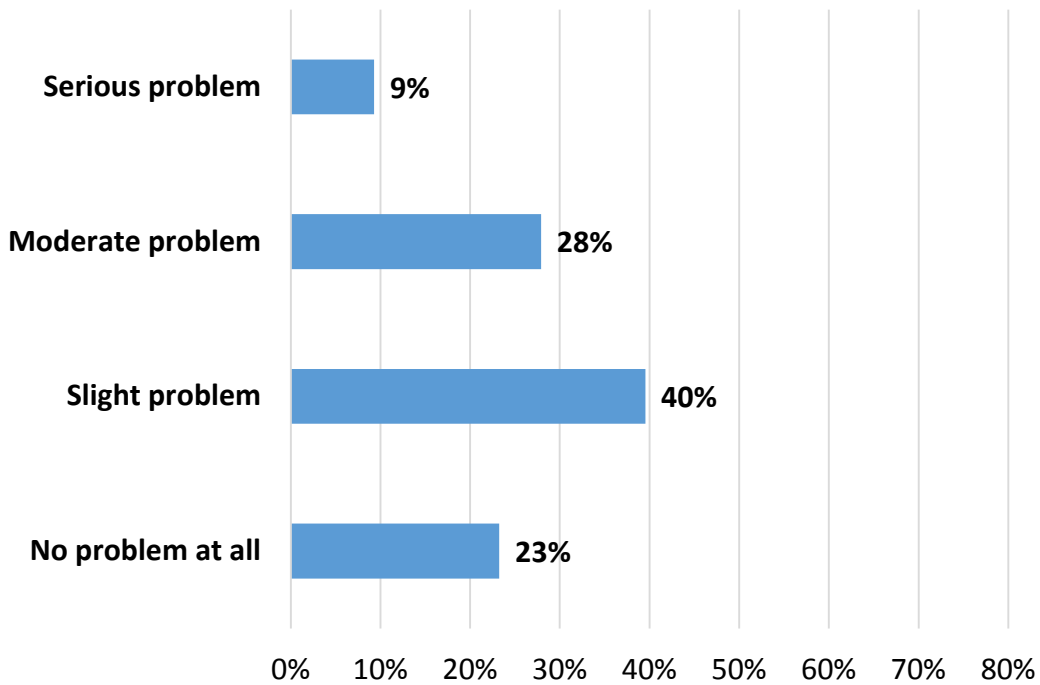
Because of the development of oil and natural gas, spending in local businesses is:

(n = 41)



### Figure 14a

Issue: Medical and health care services  
(n = 43)

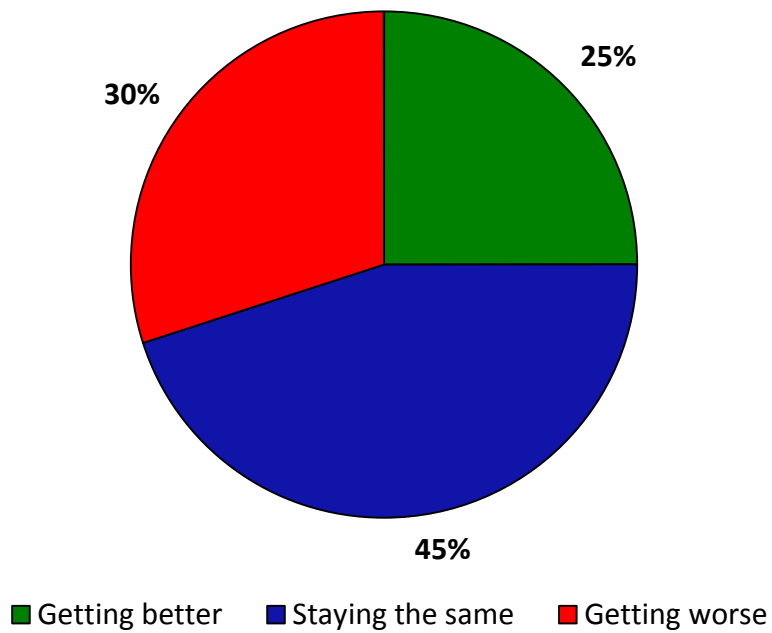


<b>Mean</b>	<b>2.23</b>
<b>Standard deviation</b>	<b>0.92</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 14b

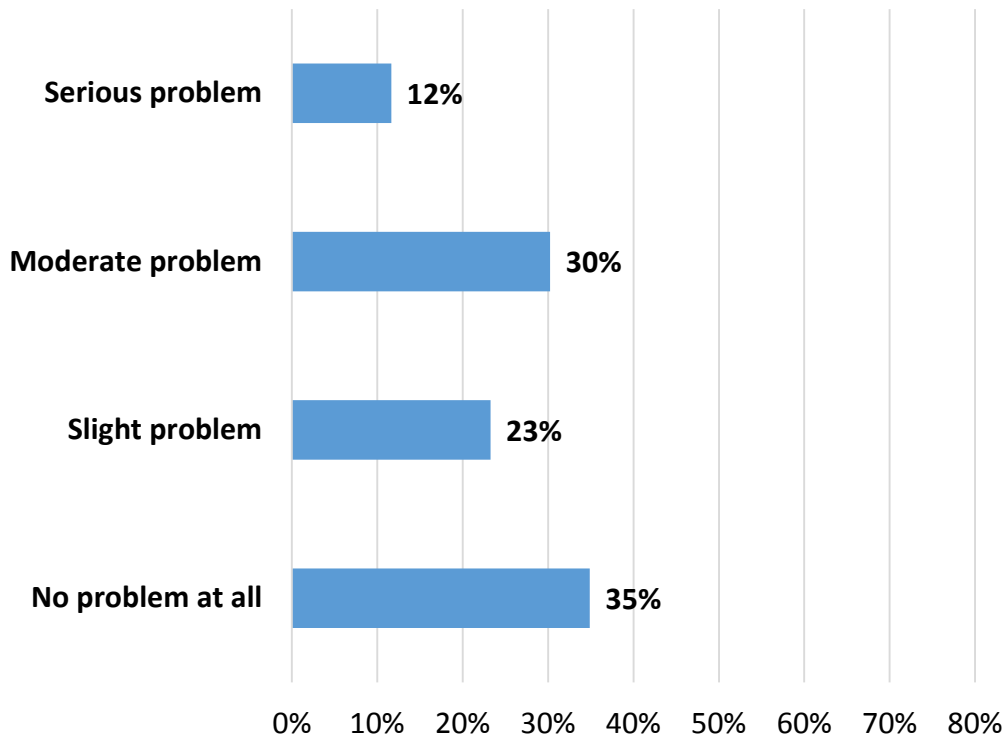
Because of the development of oil and natural gas, medical and health care services are:

(n = 40)



### Figure 15a

Issue: Personal safety  
(n = 43)

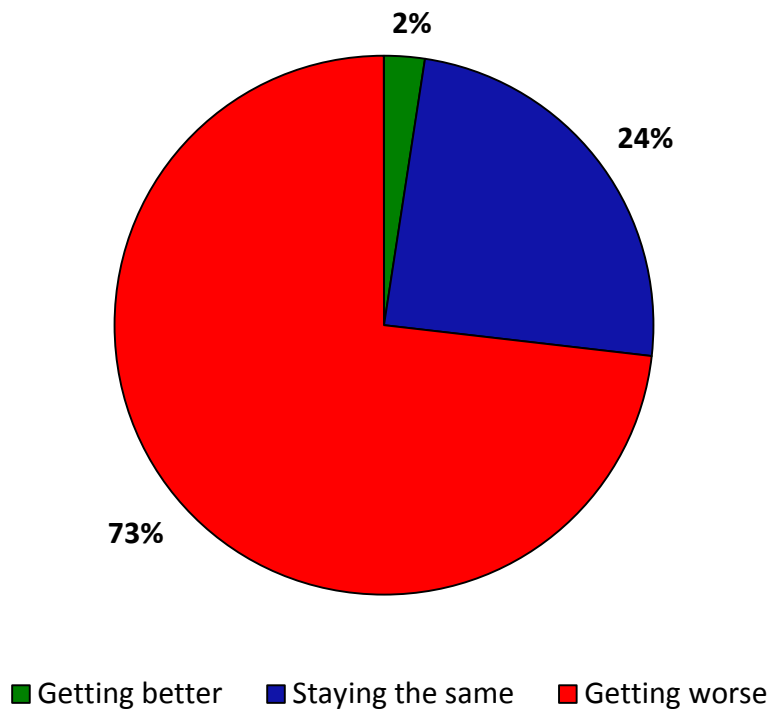


<b>Mean</b>	<b>2.19</b>
<b>Standard deviation</b>	<b>1.05</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 15b

Because of the development of oil and natural gas, personal safety is:

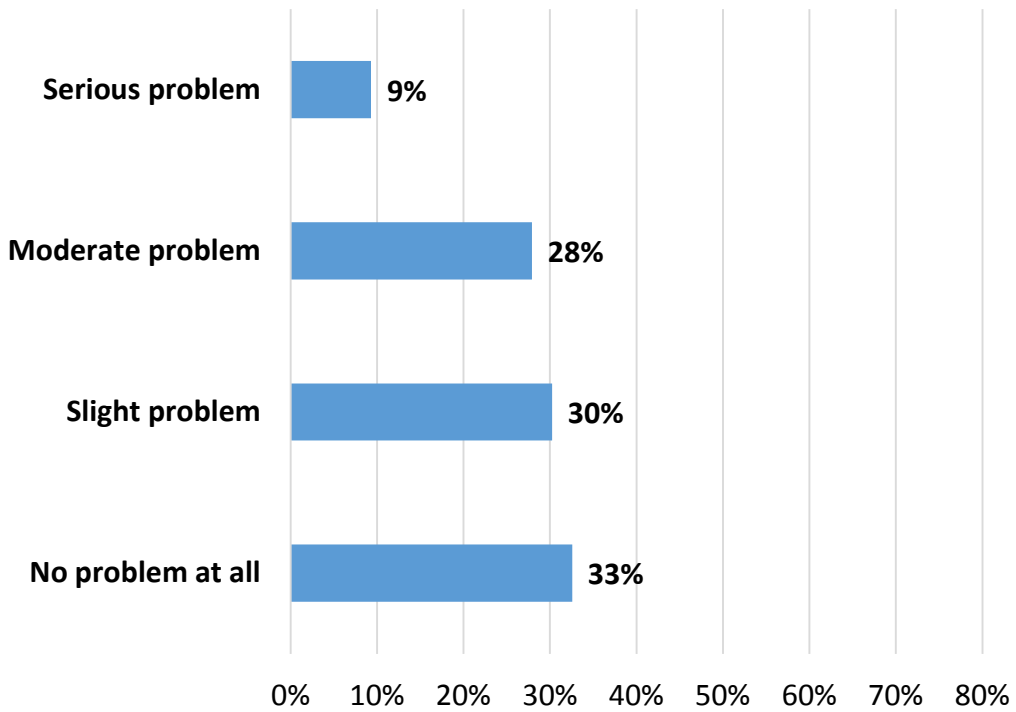
(n = 41)





## Figure 16a

Issue: Land use conflicts  
(n = 43)

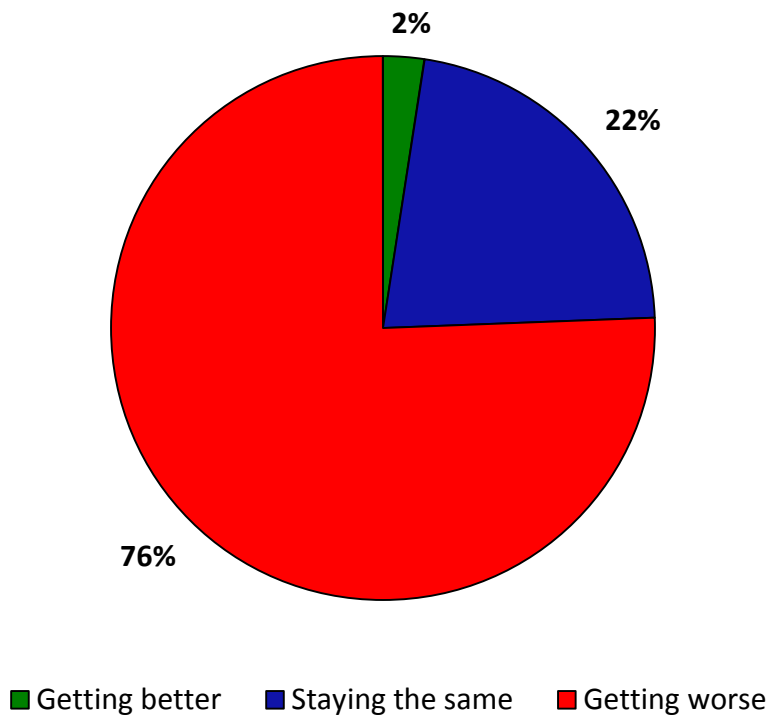


<b>Mean</b>	<b>2.14</b>
<b>Standard deviation</b>	<b>0.99</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 16b

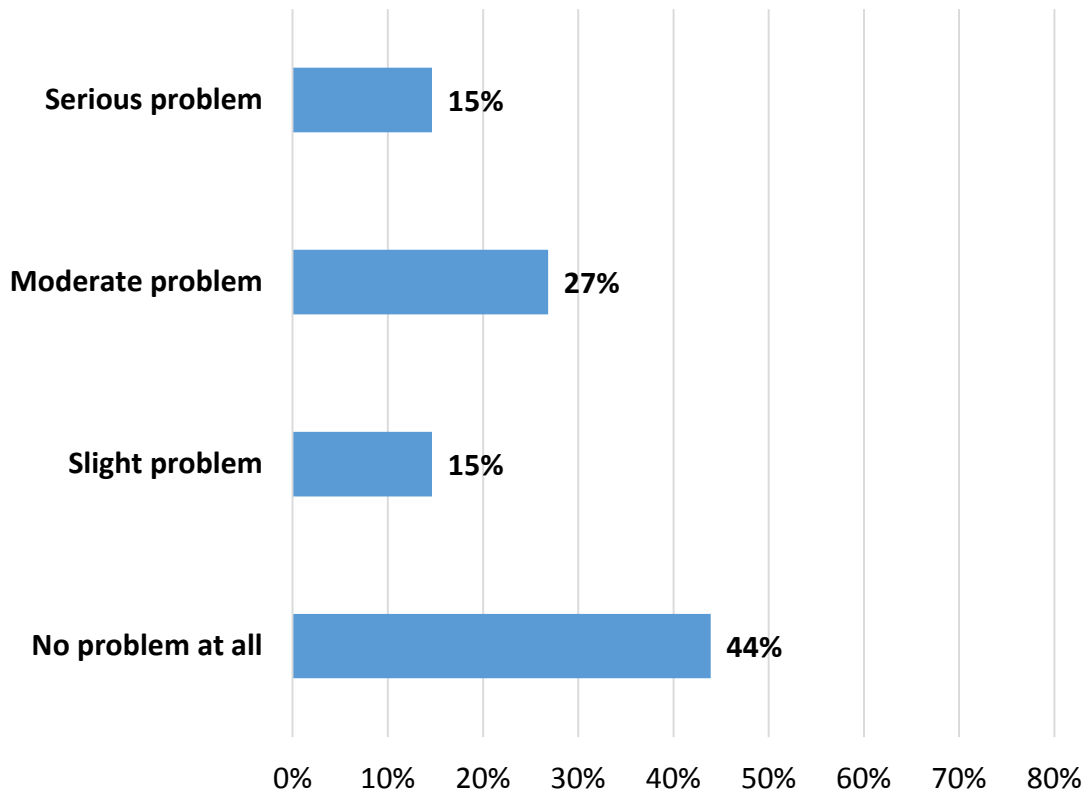
Because of the development of oil and natural gas, land use conflicts are:

(n = 41)



### Figure 17a

Issue: Quality of local schools  
(n = 41)

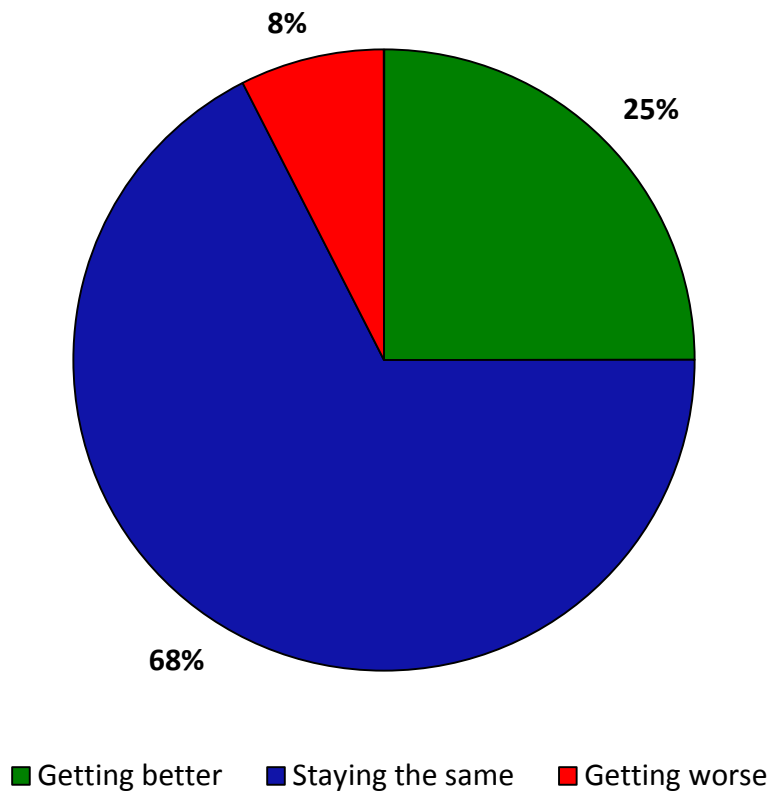


<b>Mean</b>	<b>2.12</b>
<b>Standard deviation</b>	<b>1.14</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

## Figure 17b

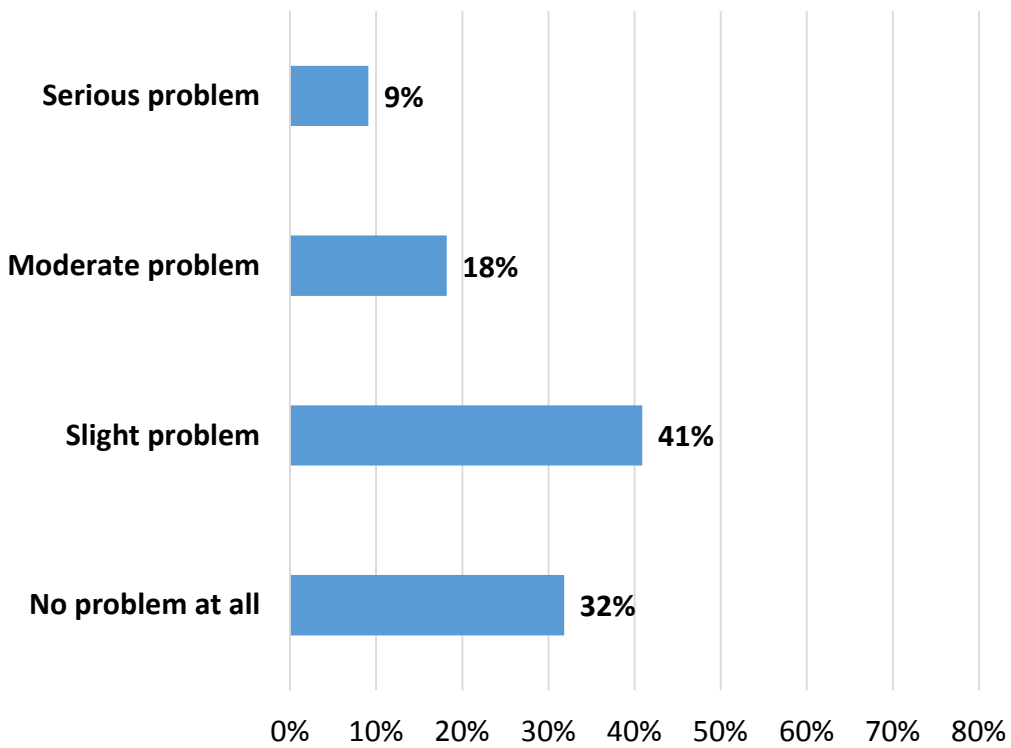
Because of the development of oil and natural gas, quality of local schools is:

(n = 40)



### Figure 18a

Issue: Sense of community well-being  
(n = 44)

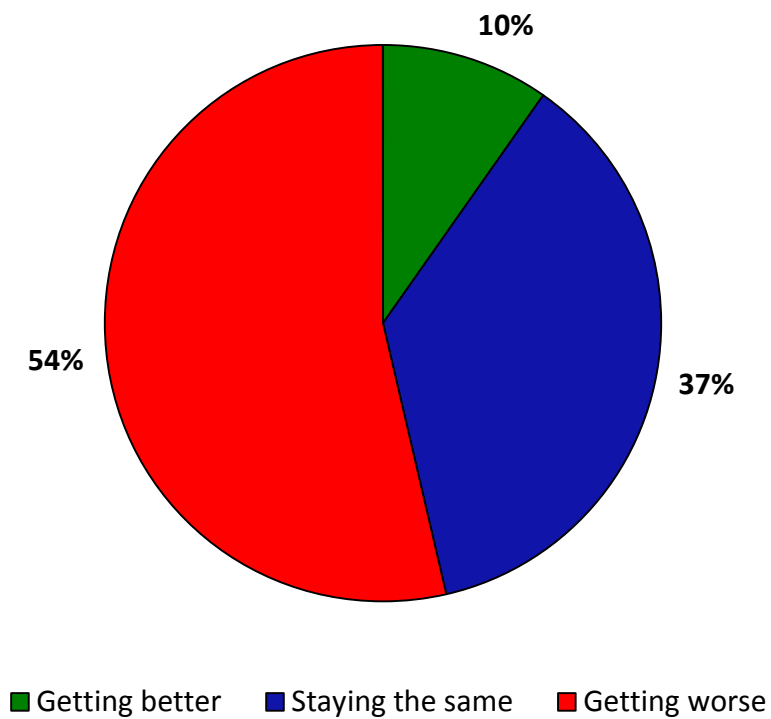


<b>Mean</b>	<b>2.05</b>
<b>Standard deviation</b>	<b>0.94</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 18b

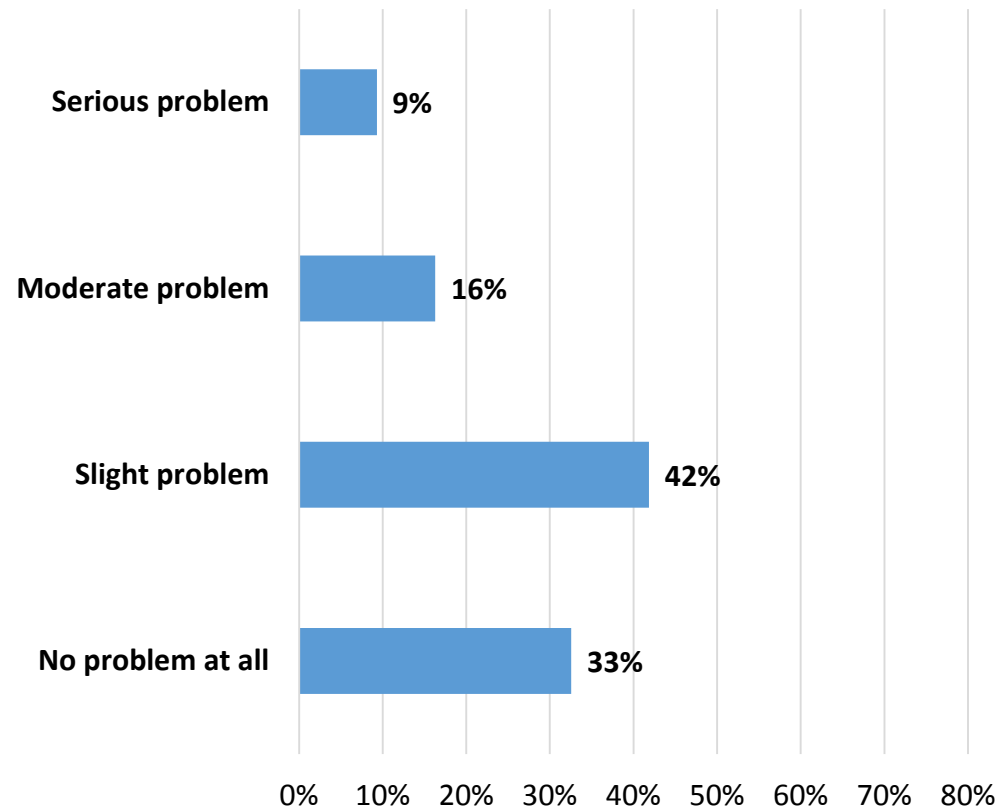
Because of the development of oil and natural gas, sense of community well-being is:

(n = 41)



### Figure 19a

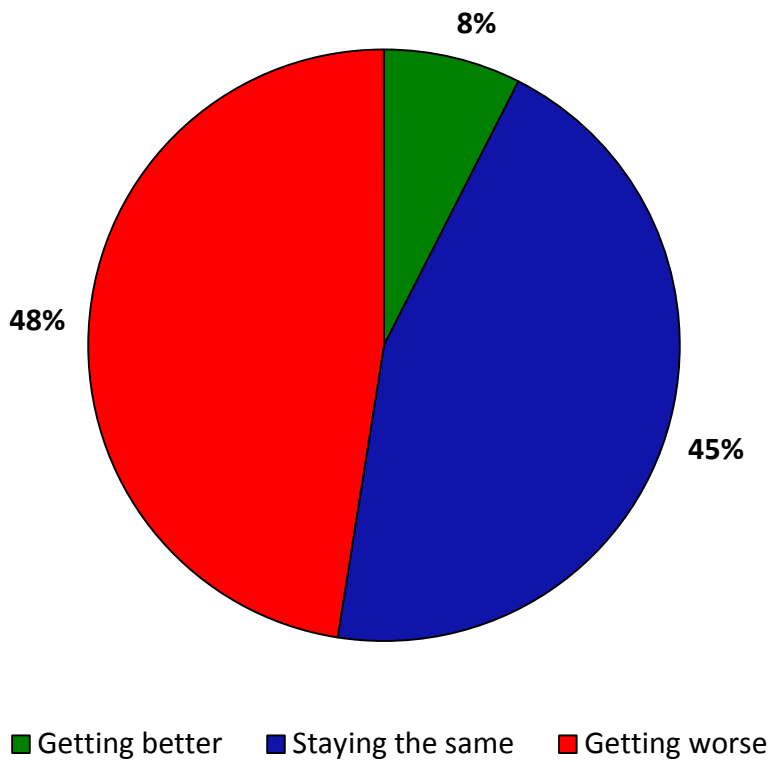
Issue: Disagreements among local residents  
(n = 43)



<b>Mean</b>	<b>2.02</b>
<b>Standard deviation</b>	<b>0.94</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

### Figure 19b

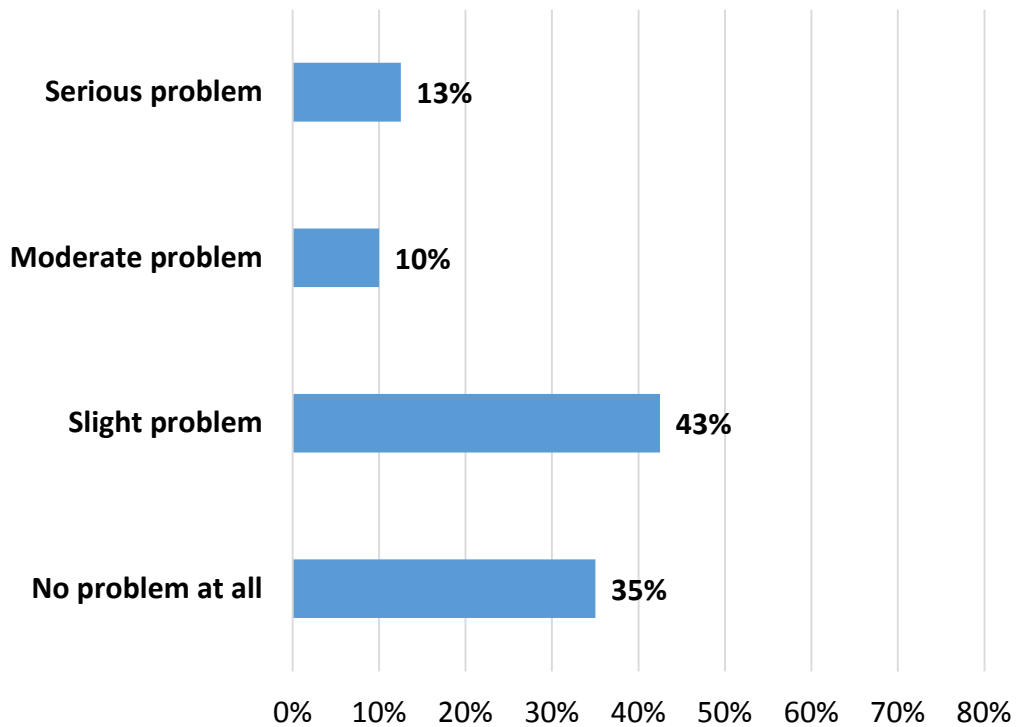
Because of the development of oil and natural gas, disagreements among local residents are:  
(n = 40)





## Figure 20a

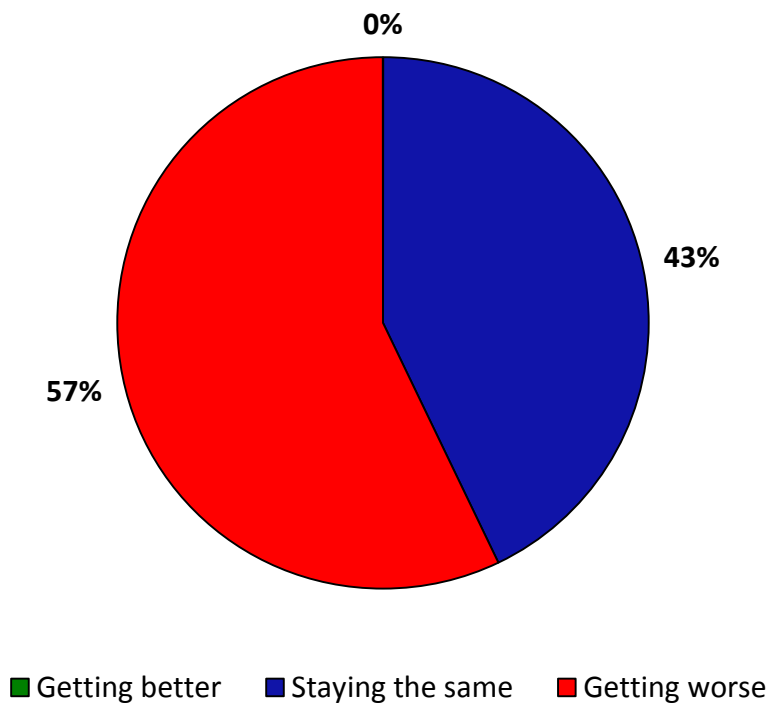
Issue: Prostitution  
(n = 40)



<b>Mean</b>	<b>2.00</b>
<b>Standard deviation</b>	<b>0.99</b>
<b>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</b>	

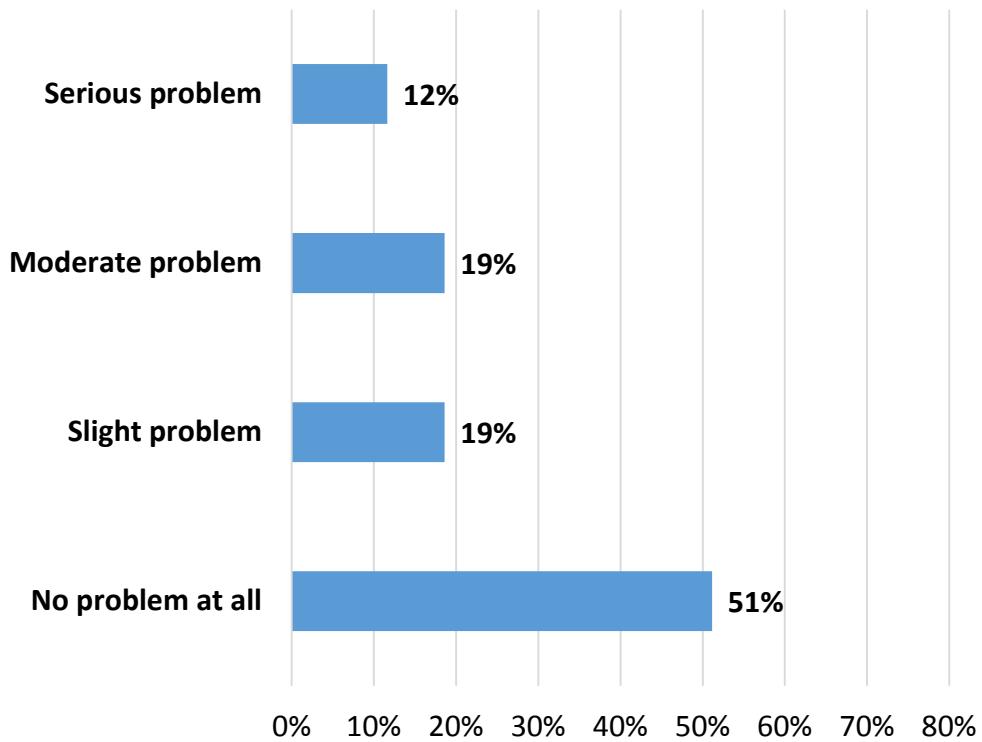
**Figure 20b**

Because of the development of oil and natural gas, prostitution is:  
(n = 35)



## Figure 21a

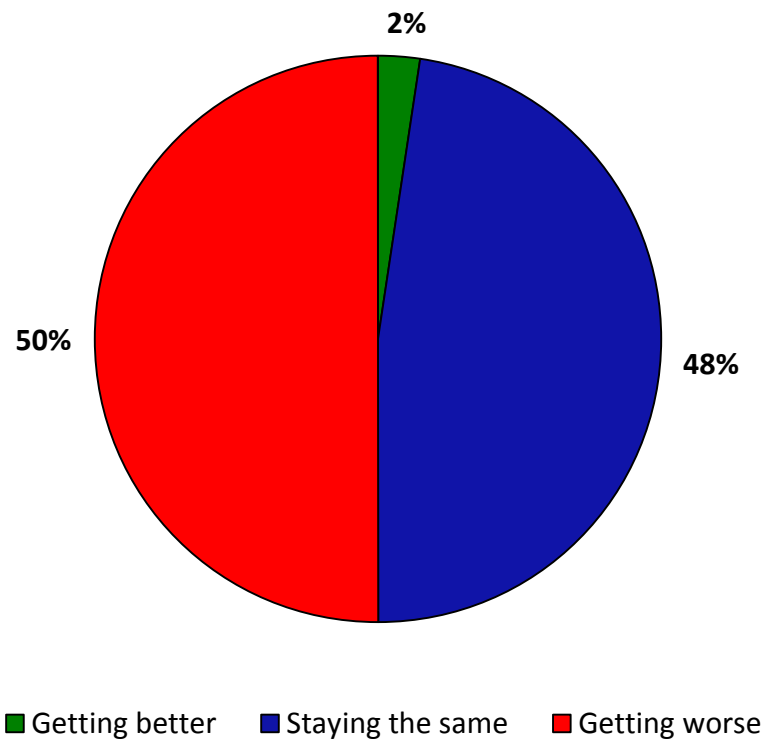
Issue: Water quality  
(n = 43)



<b>Mean</b>	<b>1.91</b>
<b>Standard deviation</b>	<b>1.09</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

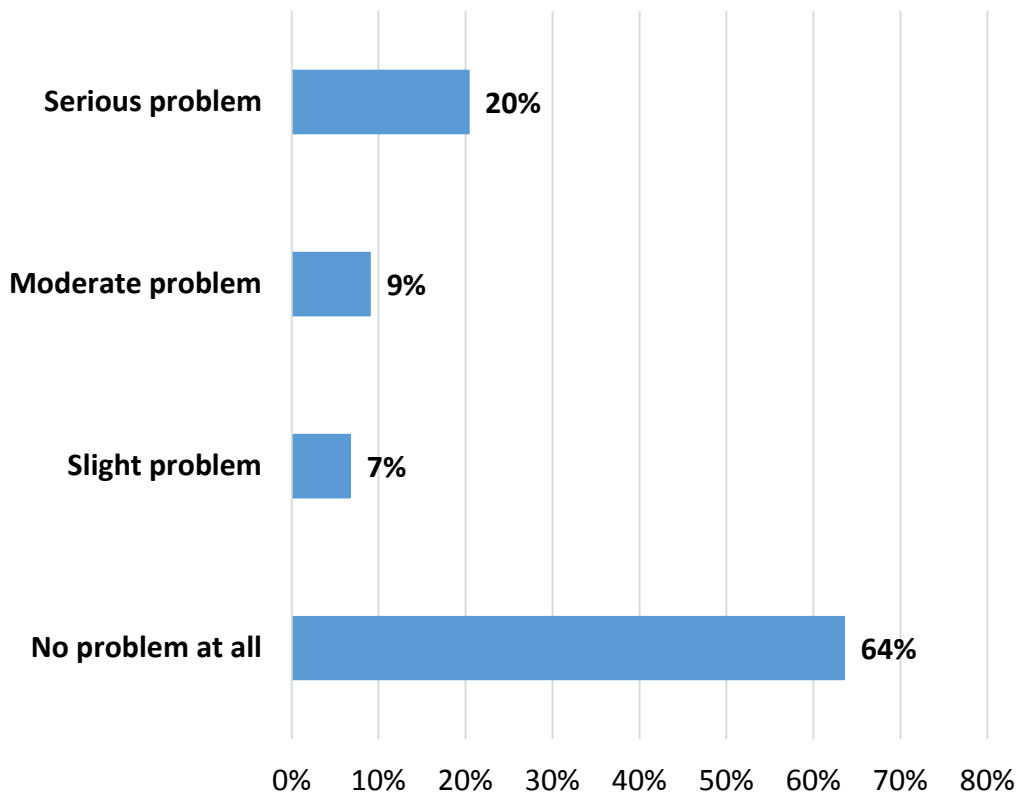
### Figure 21b

Because of the development of oil and natural gas, water quality is:  
(n = 42)



### Figure 22a

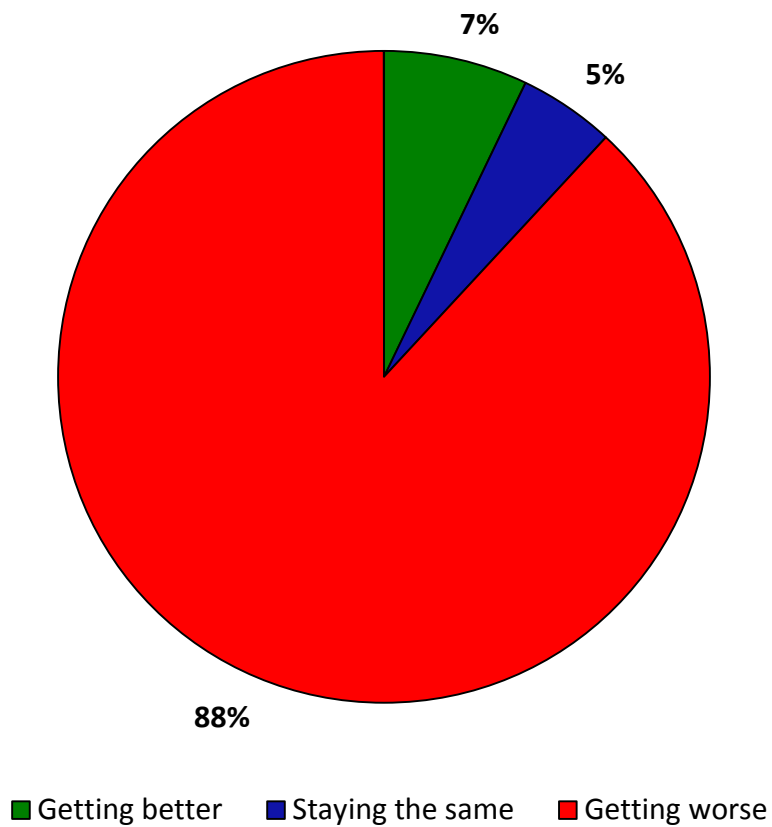
Issue: Traffic congestion  
(n = 44)



<b>Mean</b>	<b>1.86</b>
<b>Standard deviation</b>	<b>1.25</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

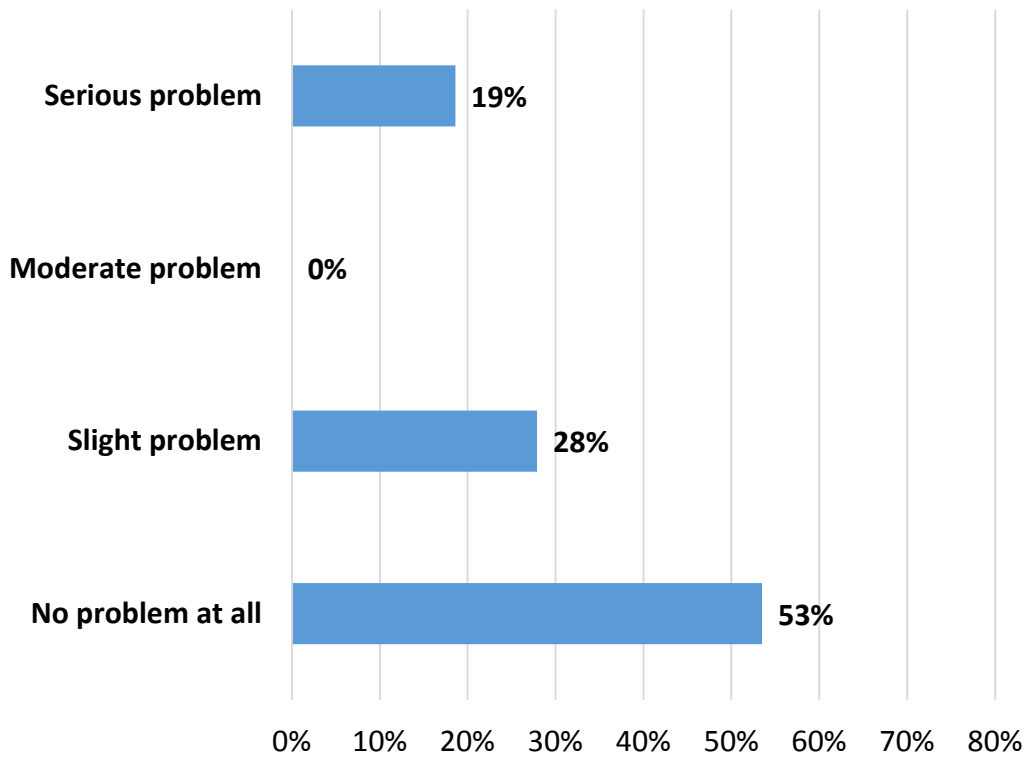
**Figure 22b**

Because of the development of oil and natural gas, traffic congestion is:  
(n = 42)



## Figure 23a

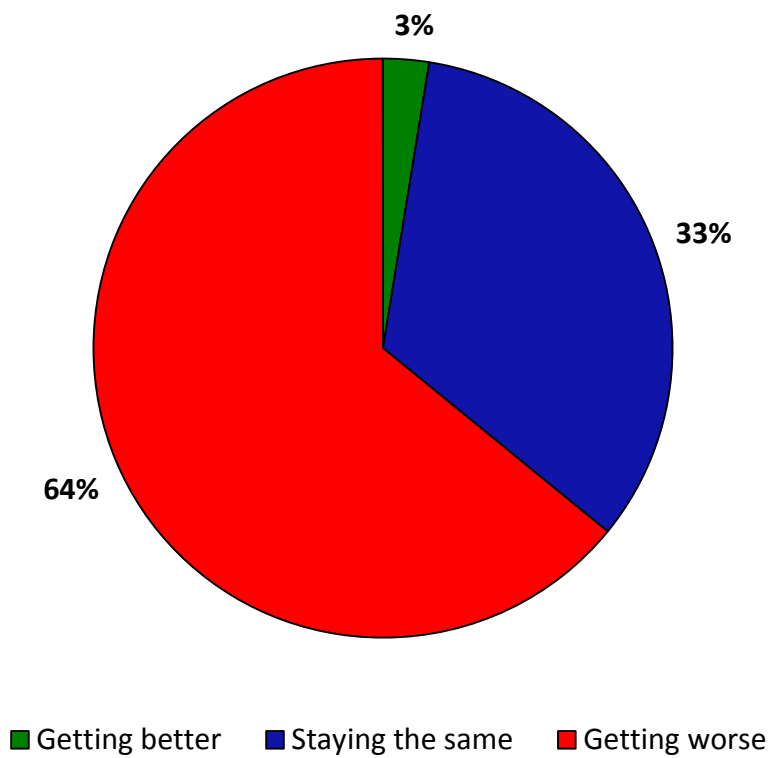
Issue: Air quality  
(n = 43)



<b>Mean</b>	<b>1.84</b>
<b>Standard deviation</b>	<b>1.13</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

**Figure 23b**

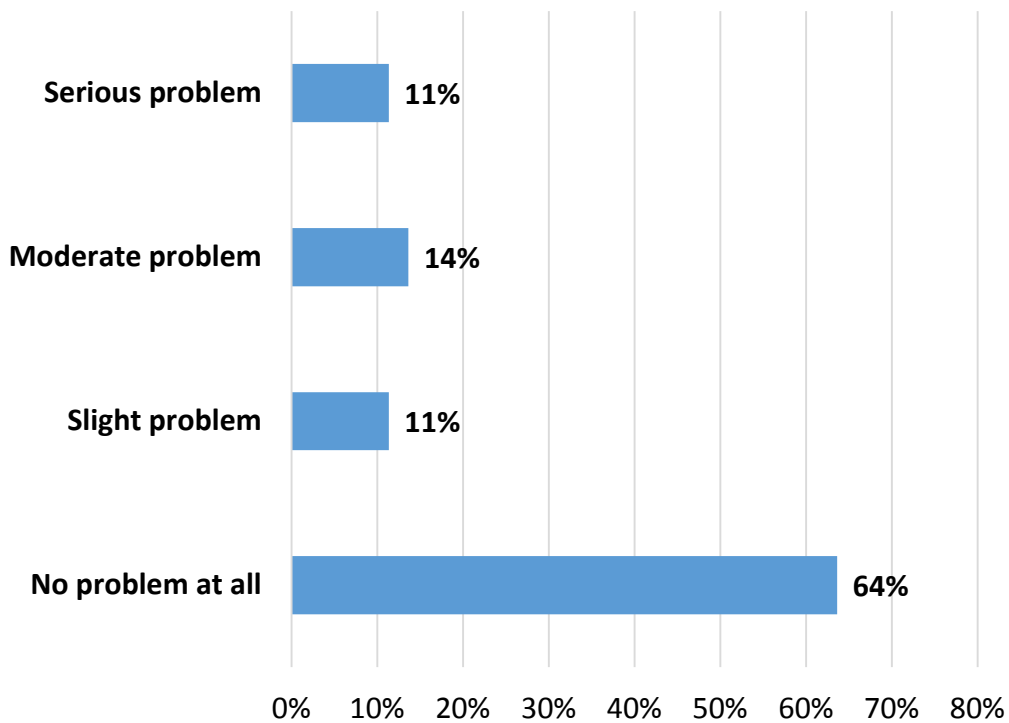
Because of the development of oil and natural gas, air quality is:  
(n = 39)





### Figure 24a

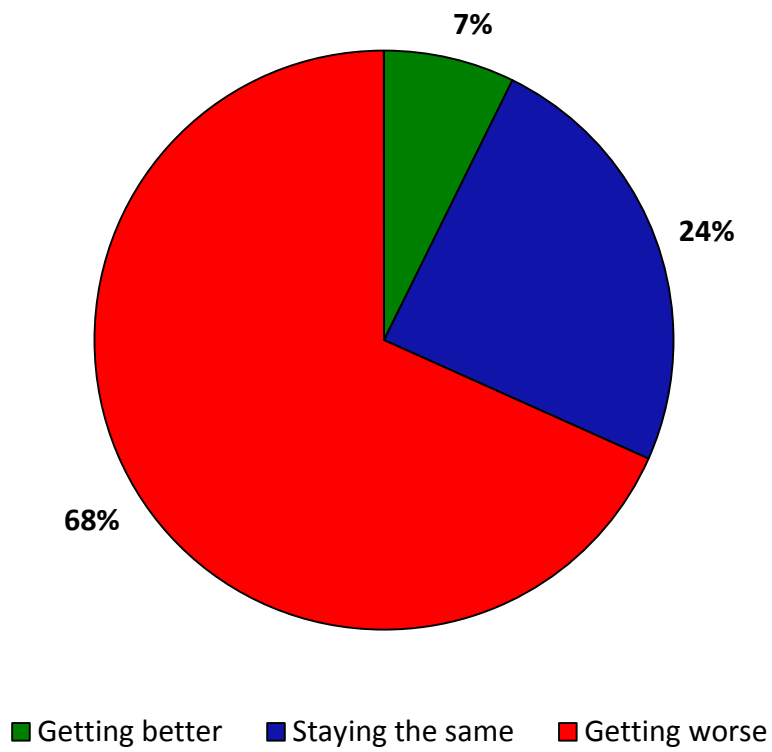
Issue: Light pollution  
(n = 44)



<b>Mean</b>	<b>1.73</b>
<b>Standard deviation</b>	<b>1.09</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

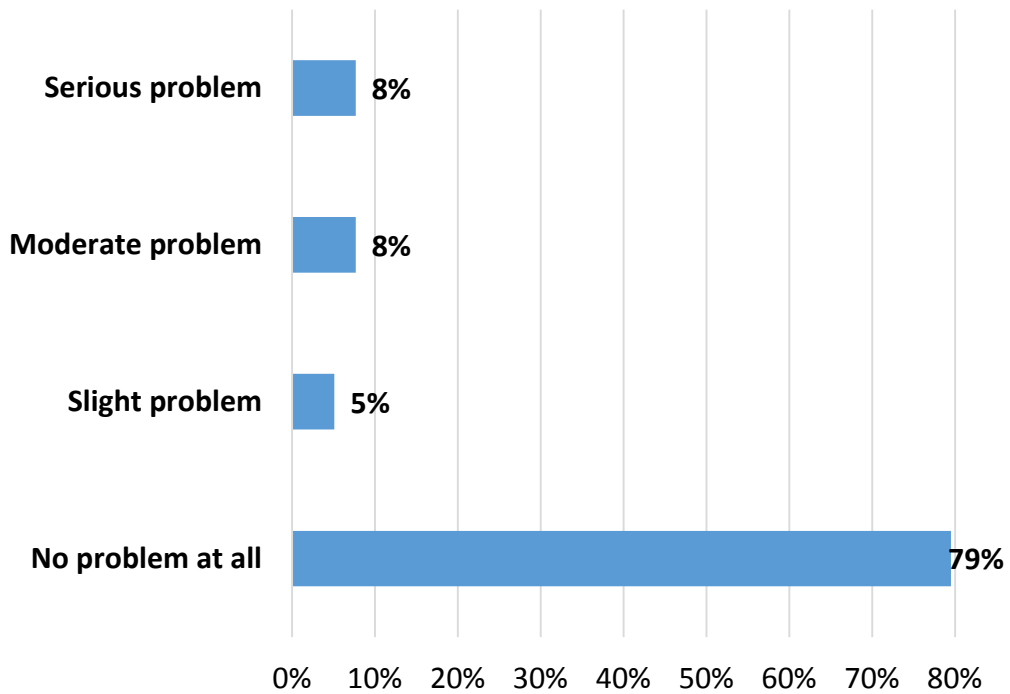
**Figure 24b**

Because of the development of oil and natural gas, light pollution is:  
(n = 41)



### Figure 25a

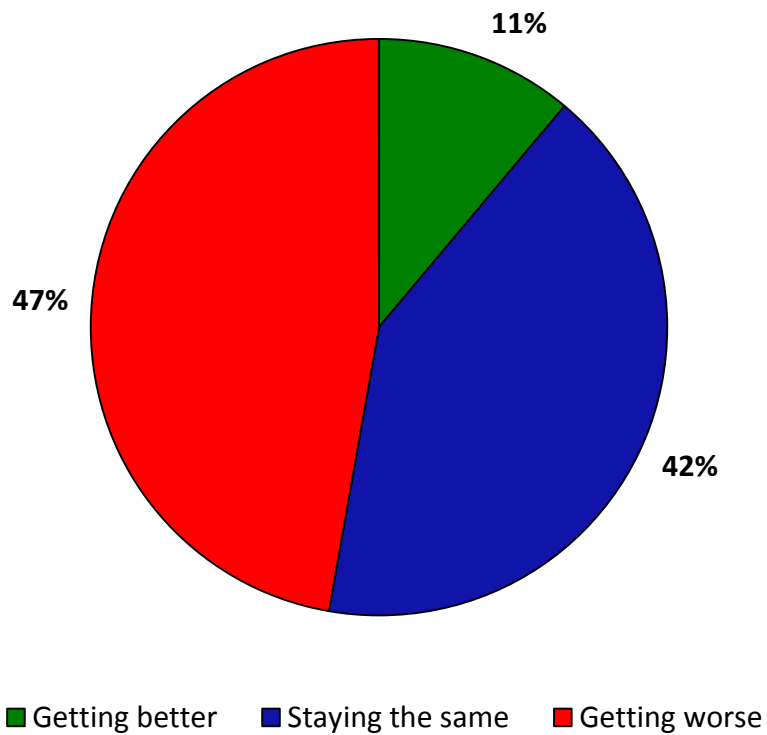
Issue: Man camps  
(n = 39)



<b>Mean</b>	<b>1.44</b>
<b>Standard deviation</b>	<b>0.94</b>
<small>(coding: 1 = no problem at all; 2 = slight problem; 3 = moderate problem; 4 = serious problem)</small>	

**Figure 25b**

Because of the development of oil and natural gas, man camps are:  
(n = 36)



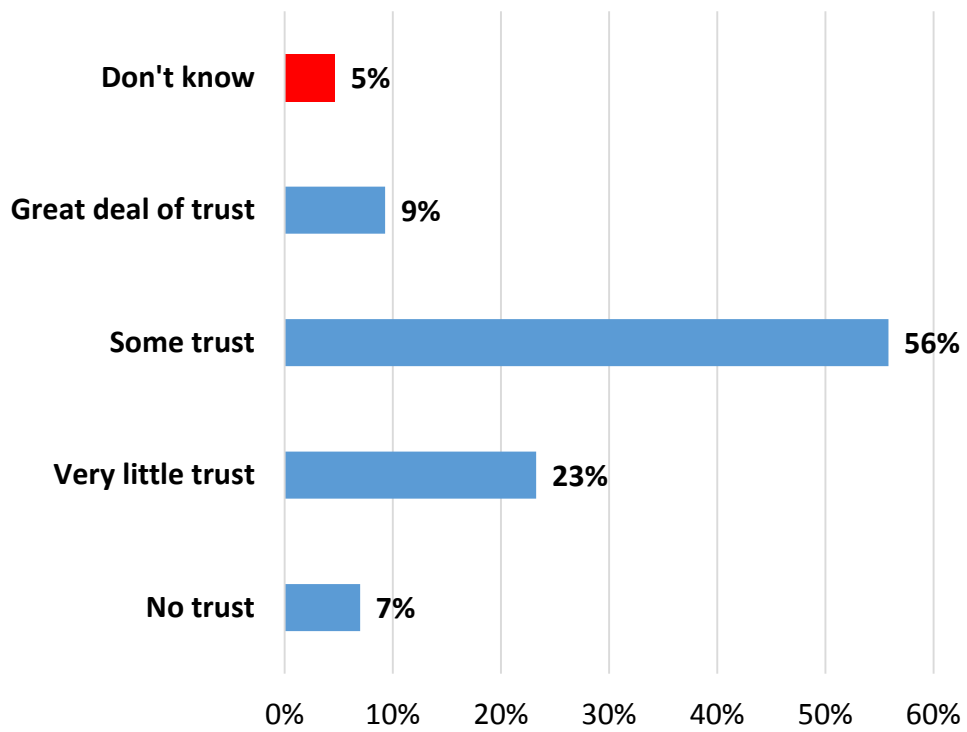
## **Section III**

### **Trust**

Figures 26a through 26m summarize respondents' levels of trust in selected sources of information on the potential impacts of oil and natural gas extraction in the Eagle Ford Shale. Table 1 ranks the selected sources of information from perceived "most" to "least" trustworthy.

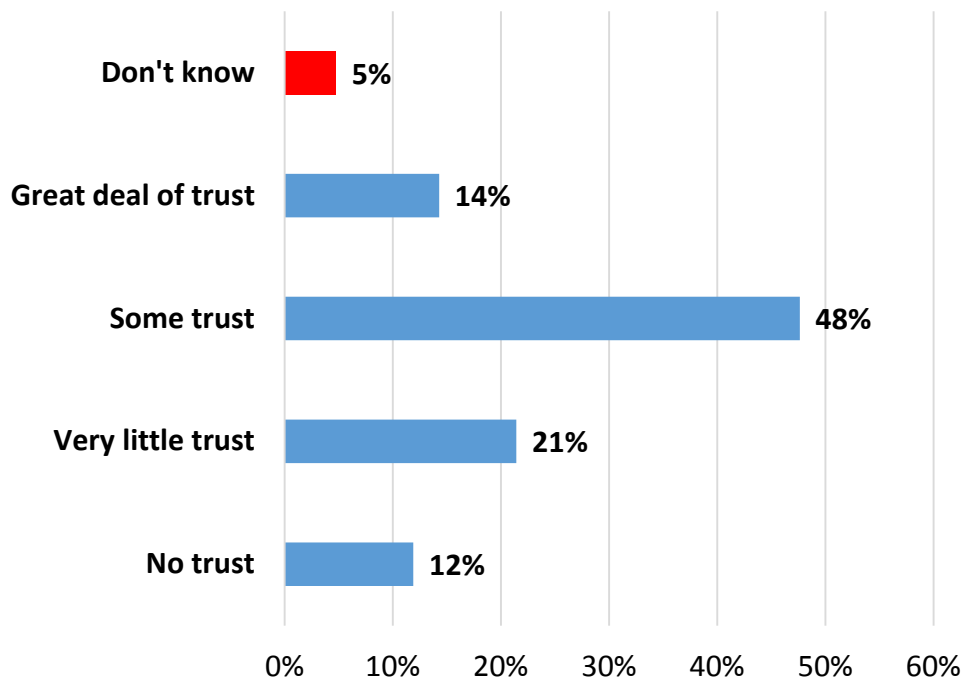
**Figure 26a**

Level of trust: Oil/natural gas industry  
(n = 43)



**Figure 26b**

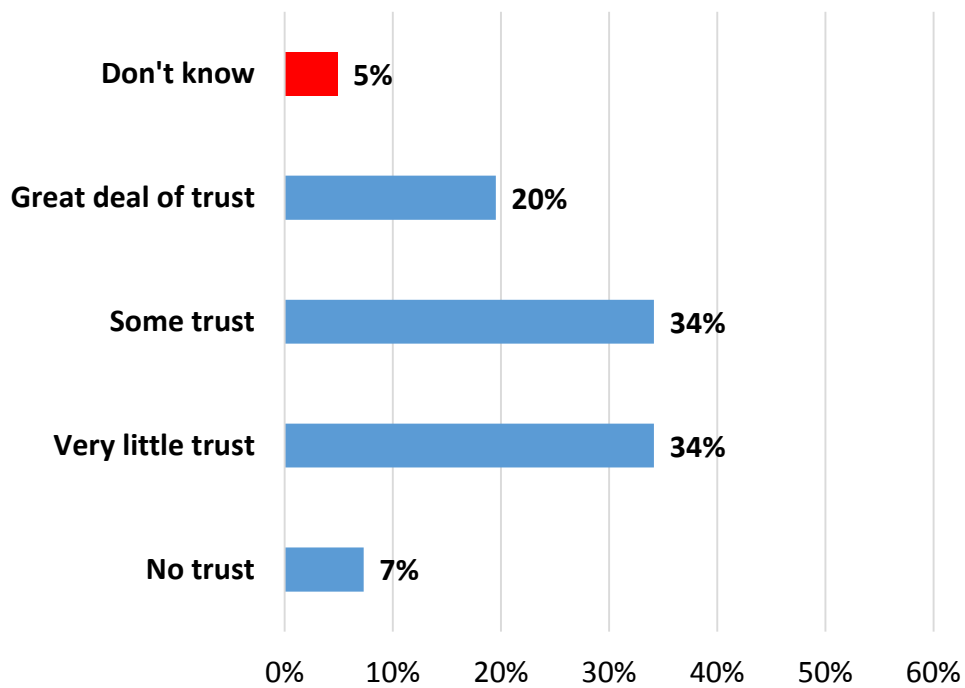
*Level of trust:* Texas Railroad Commission  
(n = 42)



**Figure 26c**

Level of trust: U.S. Environmental  
Protection Agency

(n = 41)

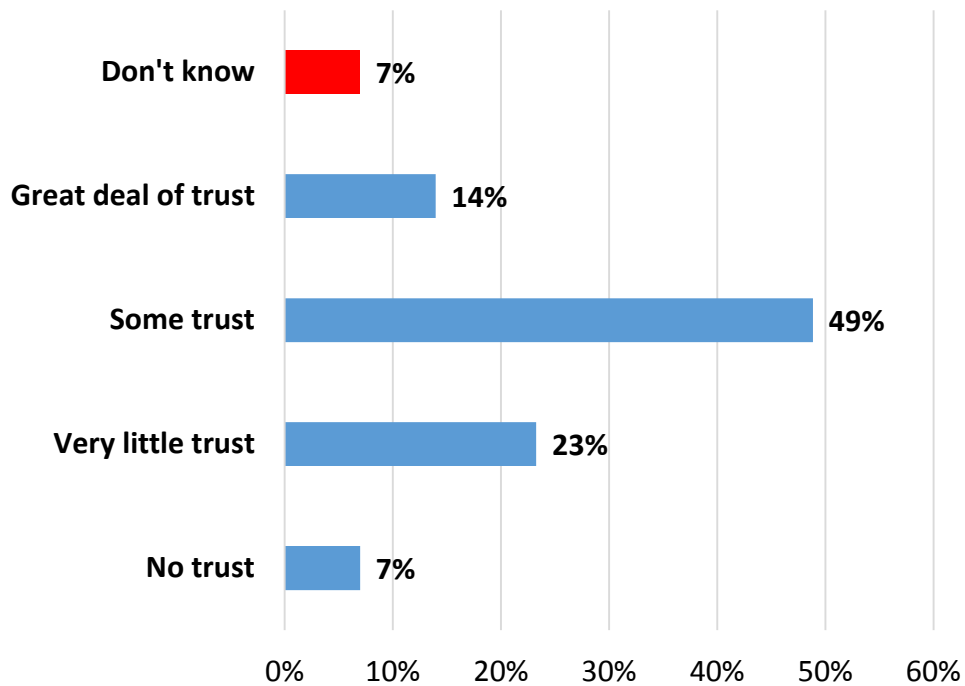




**Figure 26d**

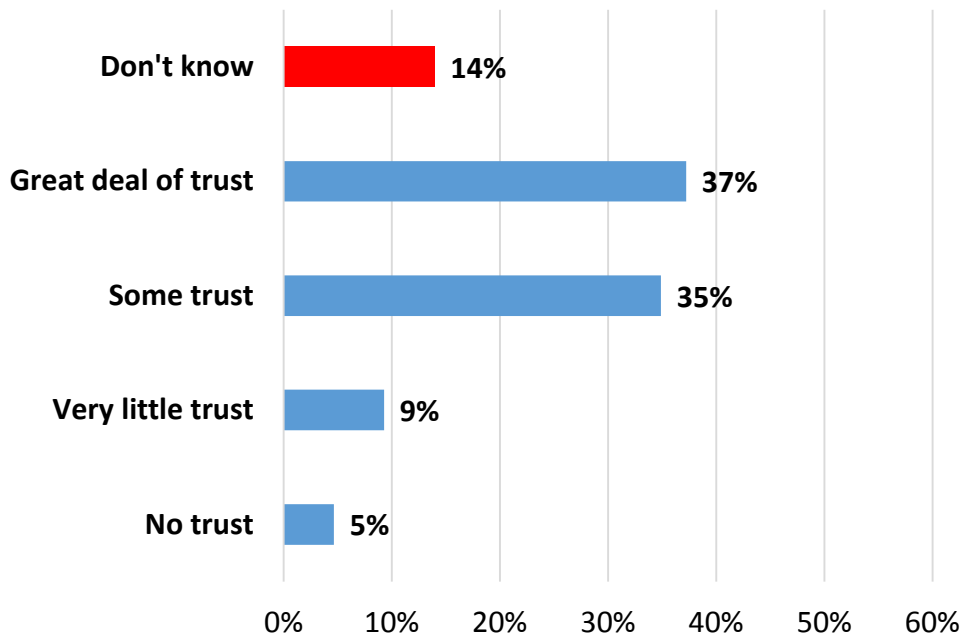
Level of trust: Texas Commission on Environmental Quality

(n = 43)



**Figure 26e**

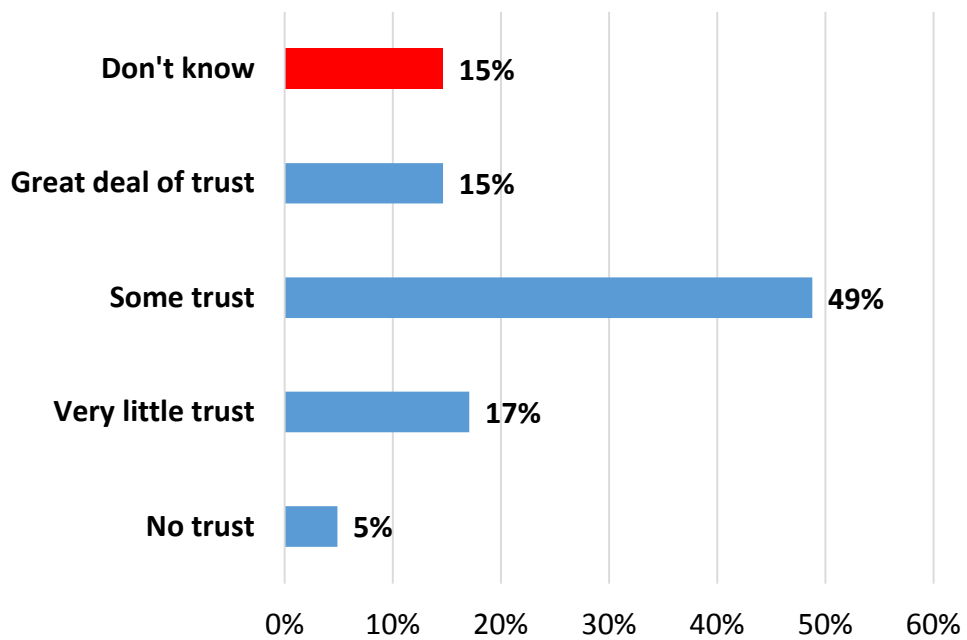
Level of trust: Texas A&M AgriLife  
Extension  
(n = 43)



**Figure 26f**

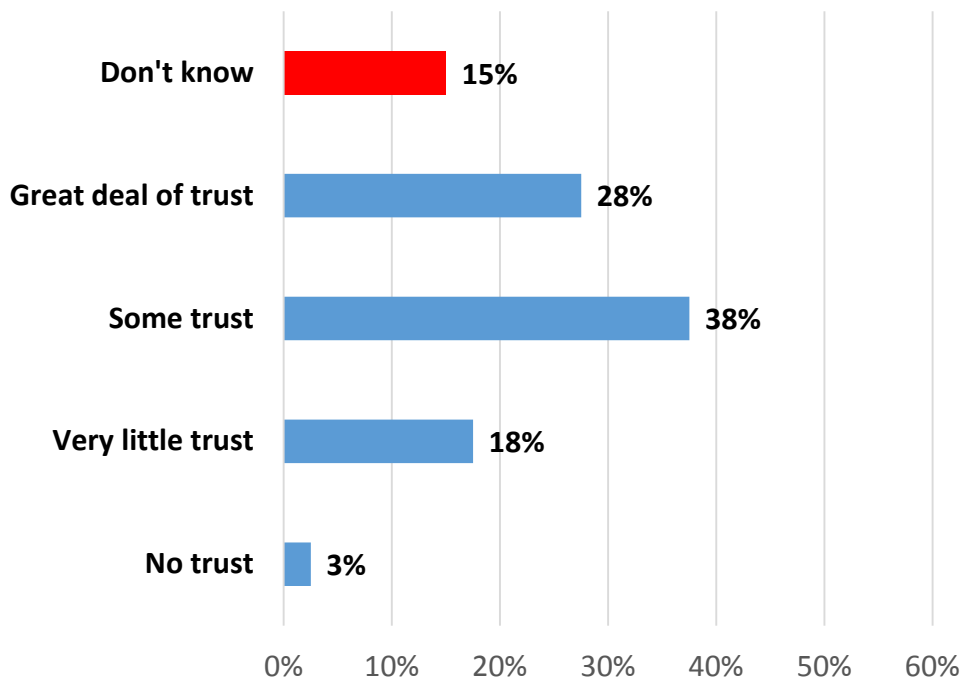
*Level of trust:* Environmental groups/organizations

(n = 41)



**Figure 26g**

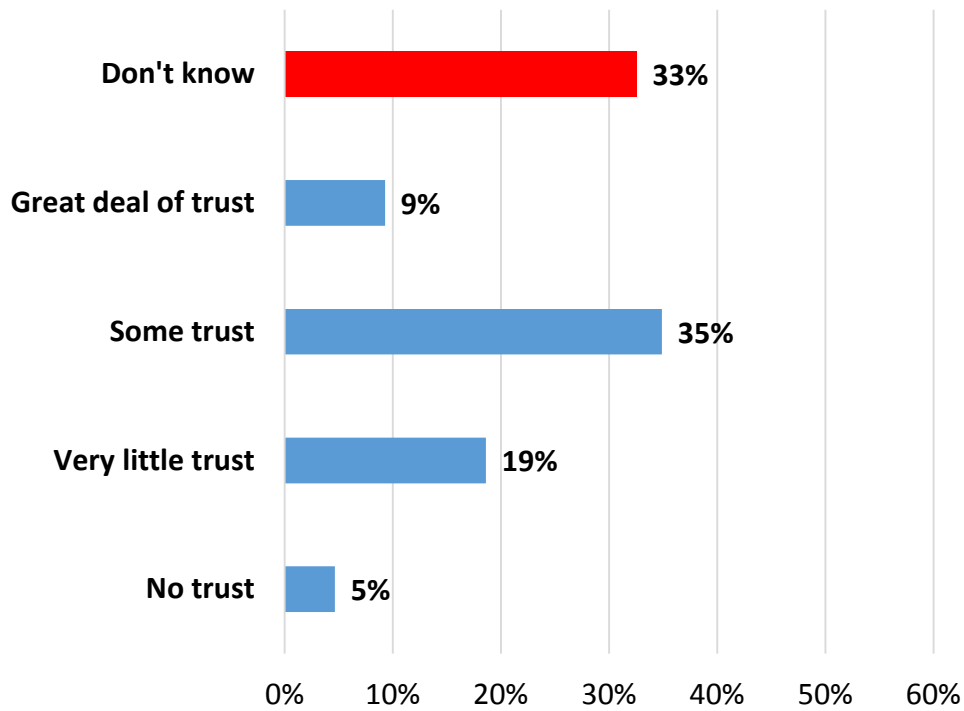
Level of trust. Scientists/researchers  
(n = 40)



**Figure 26h**

Level of trust: South Texas Energy & Economic Roundtable (STEER)

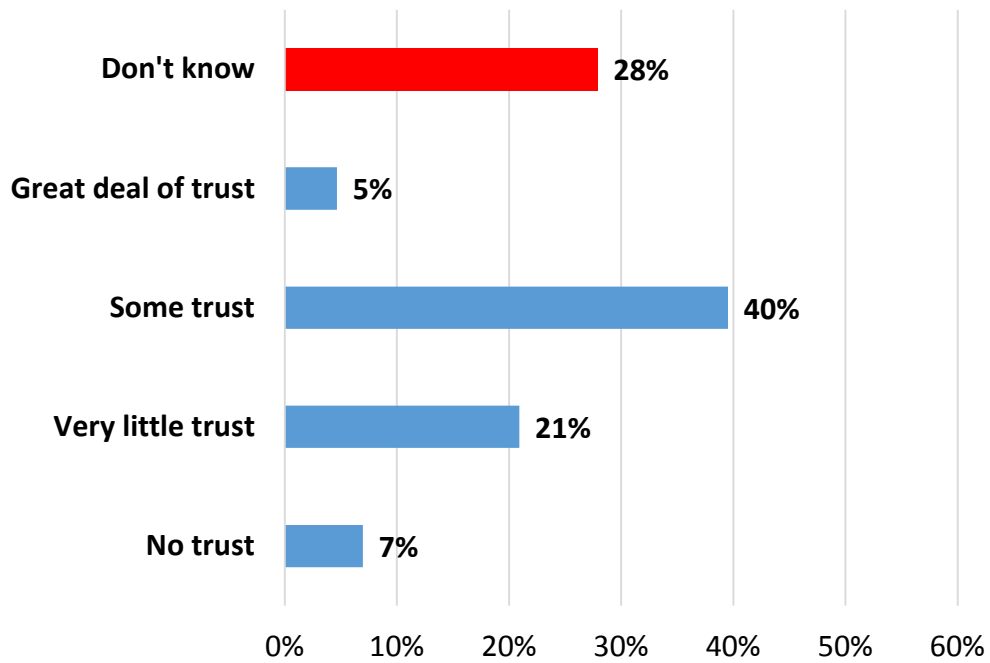
(n = 43)



**Figure 26i**

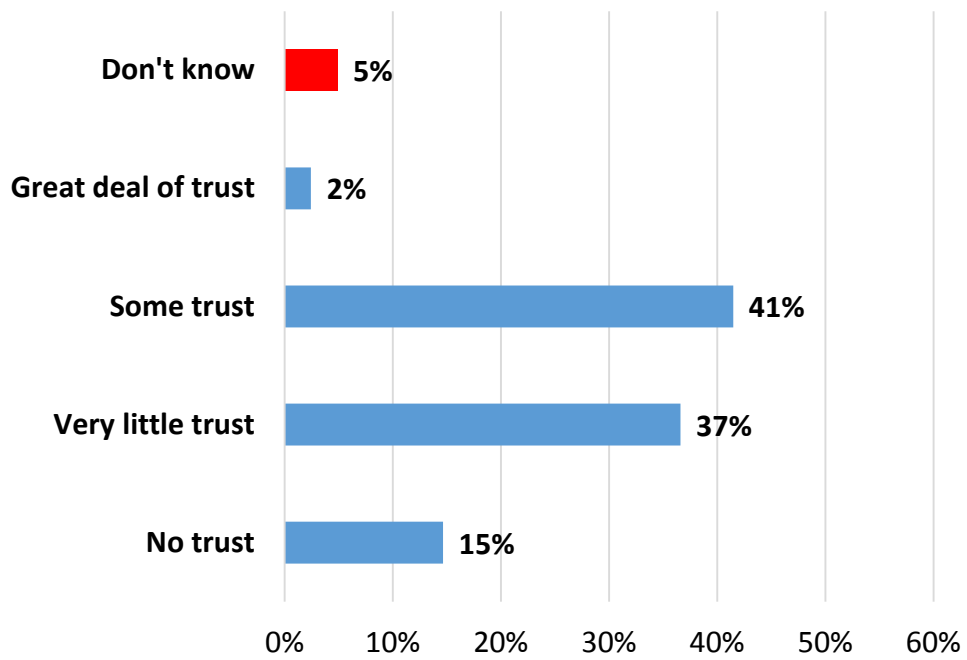
Level of trust: America's Natural Gas Alliance (ANGA)

(n = 43)



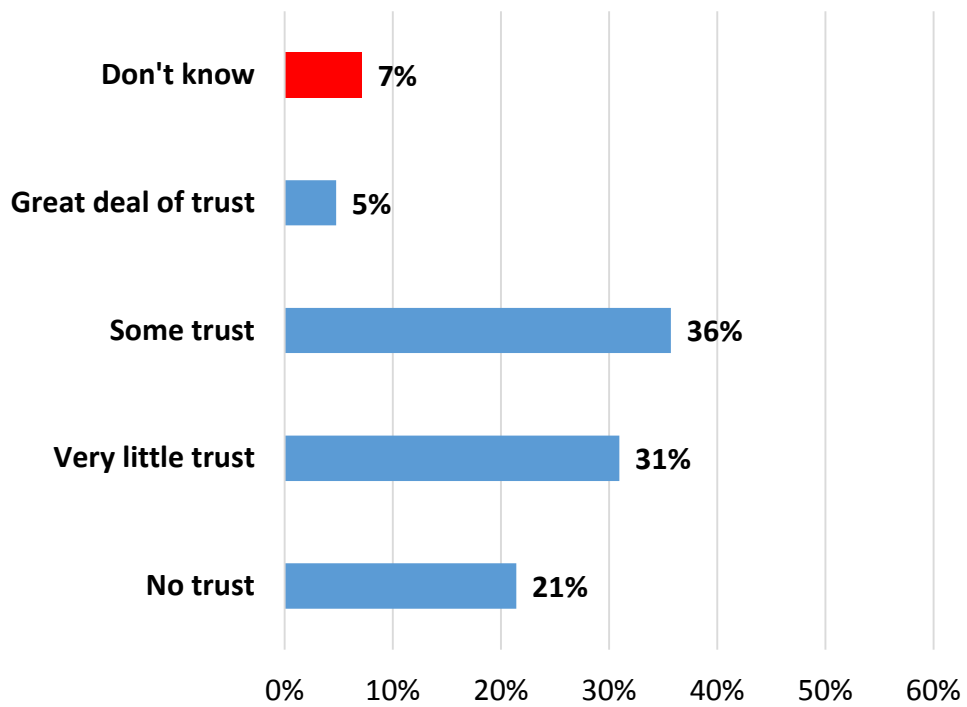
**Figure 26j**

*Level of trust:* County government  
(n = 41)



## Figure 26k

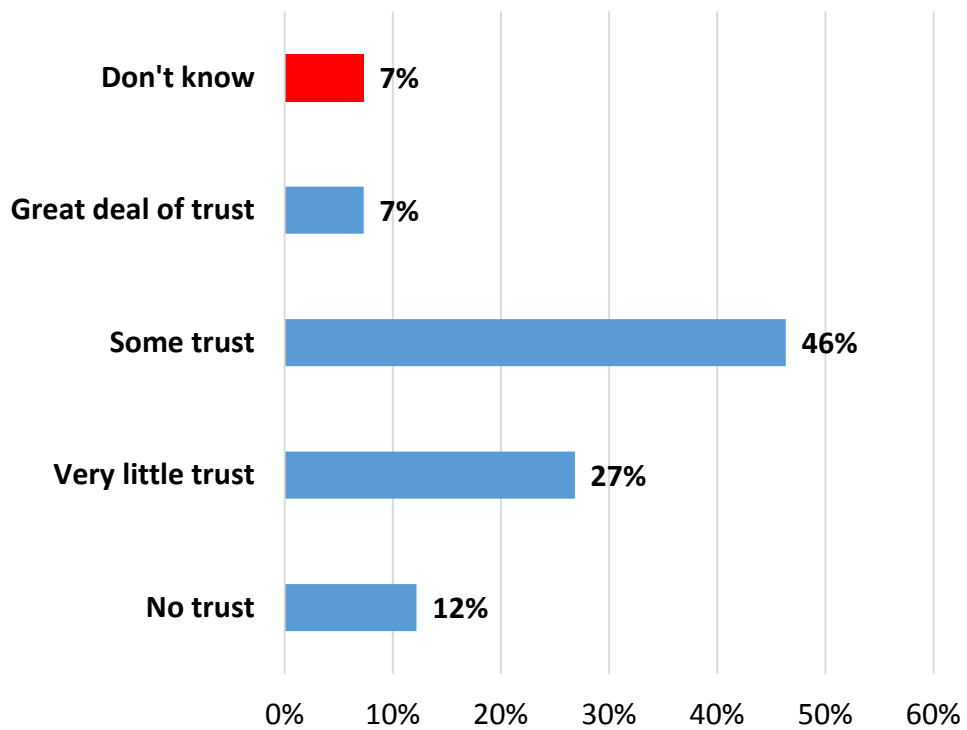
### Level of trust: Local city government (n = 42)





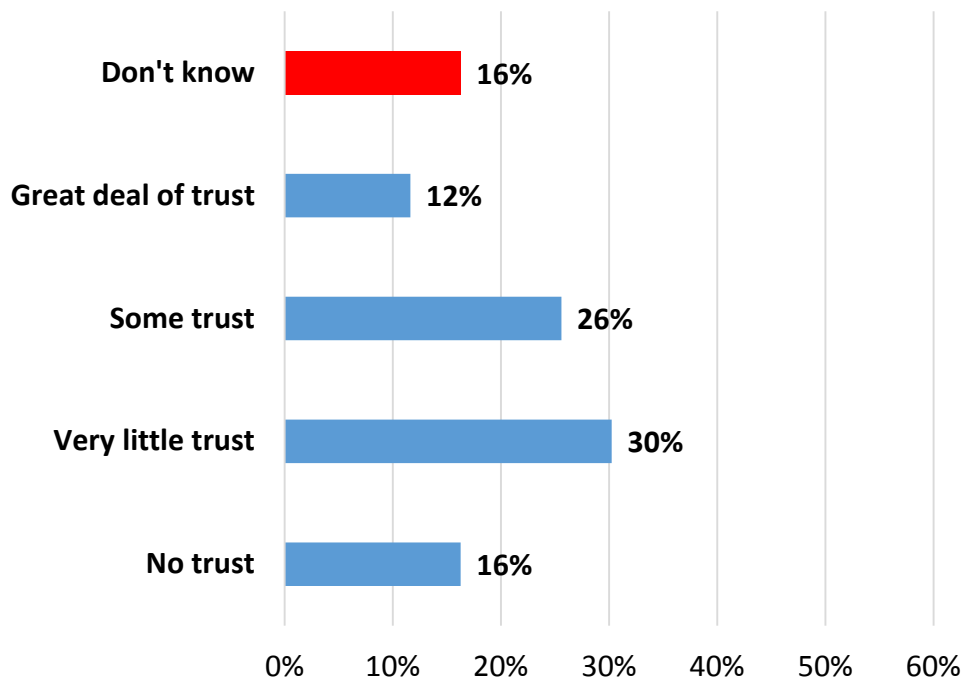
**Figure 26I**

*Level of trust:* Texas State Legislature  
(n = 41)



**Figure 26m**

*Level of trust:* Eagle Ford Consortium  
(n = 43)



**Table 1**

Of the groups listed above, which one do you believe is MOST trustworthy?

<b>Groups</b>	<b>n</b>
Texas A&M AgriLife Extension	6
U.S. Environmental Protection Agency	5
Oil/natural gas industry	3
Environmental groups/organizations	3
Scientists/researchers	3
Our local government	2
Eagle Ford Consortium	2
Texas Commission on Environmental Quality	2
Texas Railroad Commission	1
My county government	1
South Texas Energy & Economic Roundtable (STEER)	0
America's Natural Gas Alliance (ANGA)	0
Texas State Legislature	0
None/Not sure	5

## **Section IV**

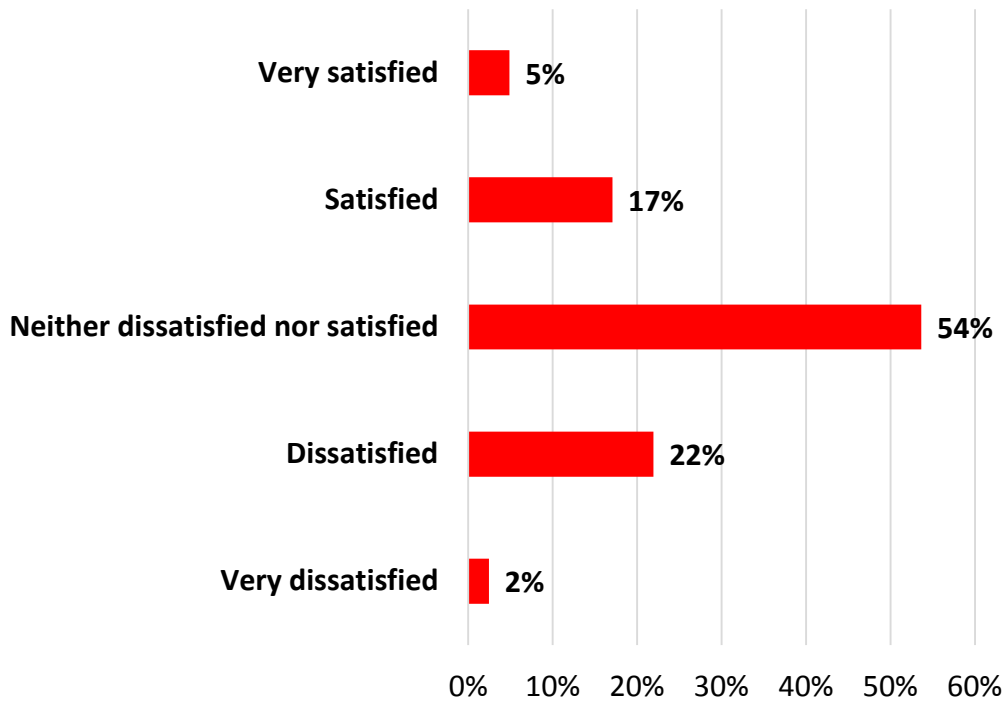
# **Oil and Gas Industry Performance**

Figures 27a through 27l summarize respondents' levels of satisfaction with the oil and natural gas industry's performance in the Eagle Ford Shale.

**Figure 27a**

Extent to which industry communication practices are adaptable to local emergencies.

(n = 41)

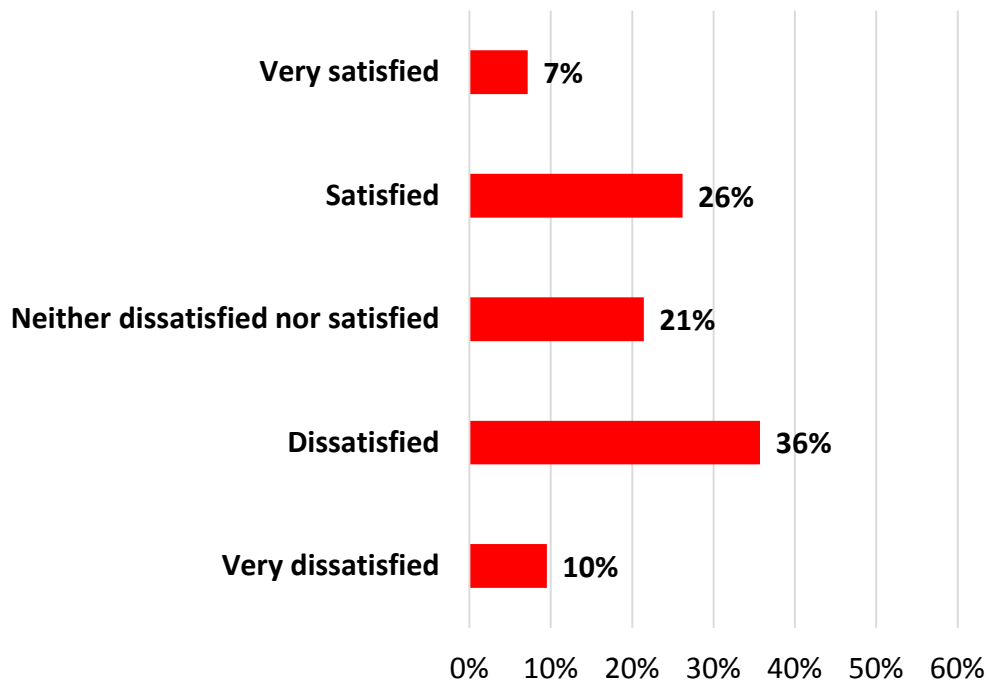


<b>Mean</b>	<b>3.00</b>
<b>Standard deviation</b>	<b>0.84</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

**Figure 27b**

Extent to which the industry knows about its impacts on local communities.

(n = 42)

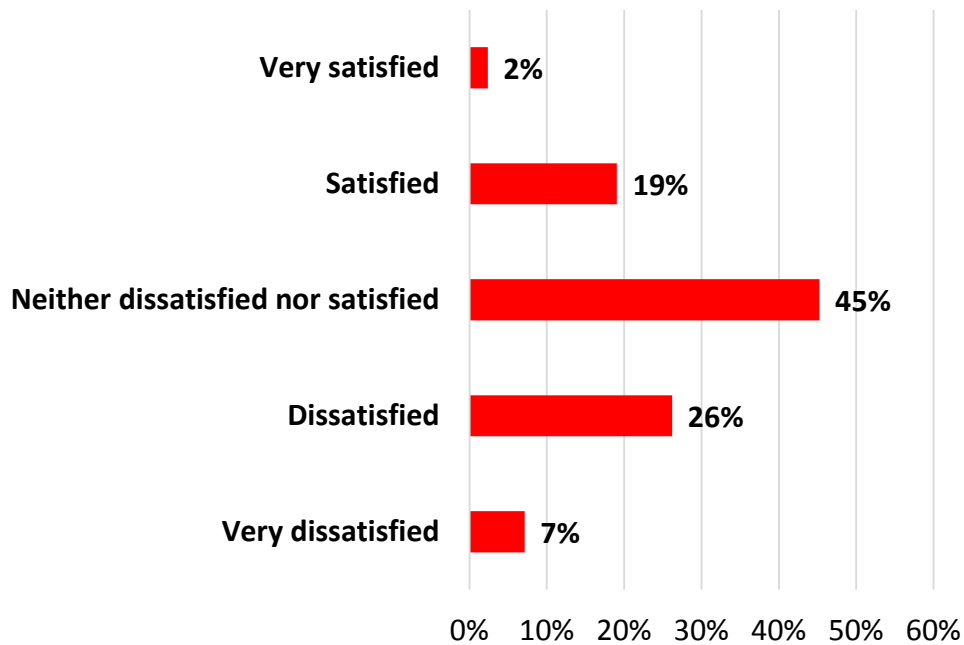


<b>Mean</b>	<b>2.86</b>
<b>Standard deviation</b>	<b>1.14</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

## Figure 27c

Extent to which crises are handled appropriately through communication by the industry.

(n = 42)



**Mean** 2.83

**Standard deviation** 0.91

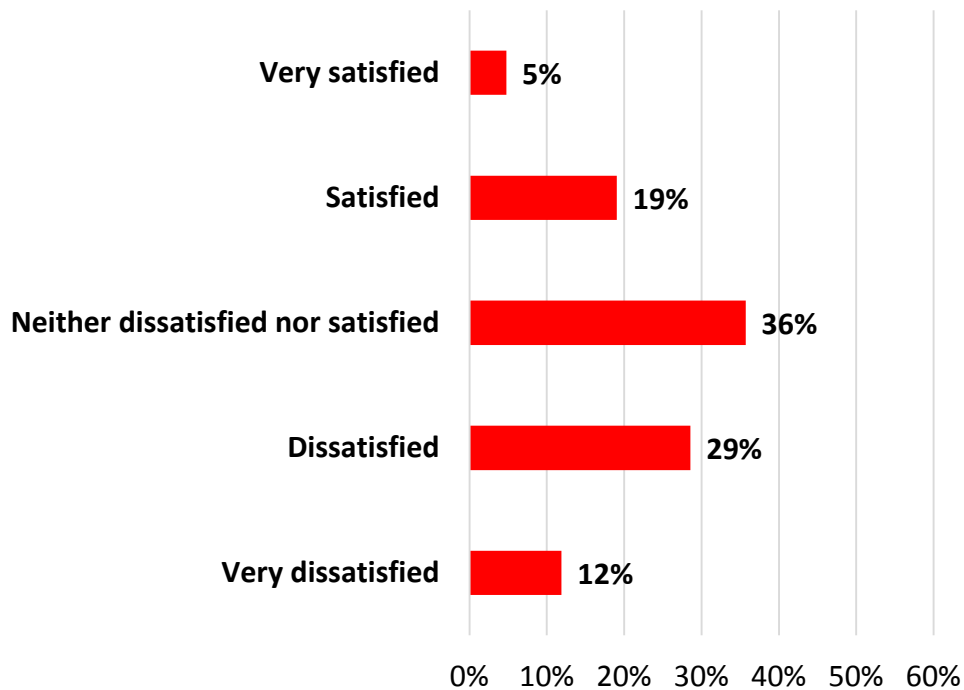
coding:

1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied

**Figure 27d**

Extent to which the industry responds to concerns raised by local community residents.

(n = 42)



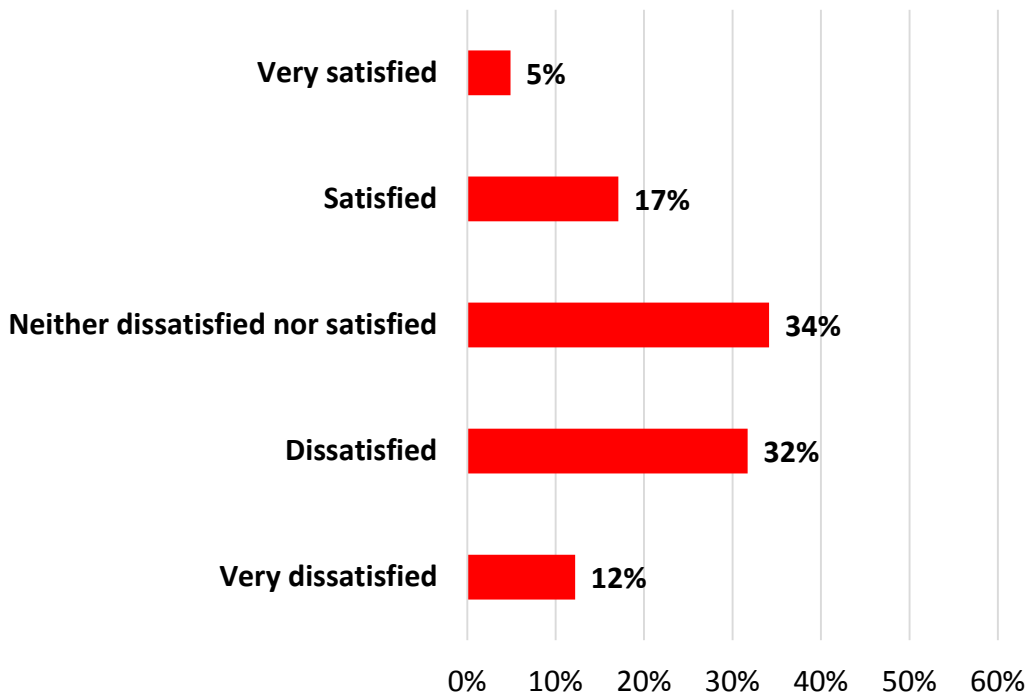
<b>Mean</b>	<b>2.76</b>
<b>Standard deviation</b>	<b>1.05</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	



**Figure 27e**

Extent to which the industry's communications are interesting and helpful.

(n = 41)

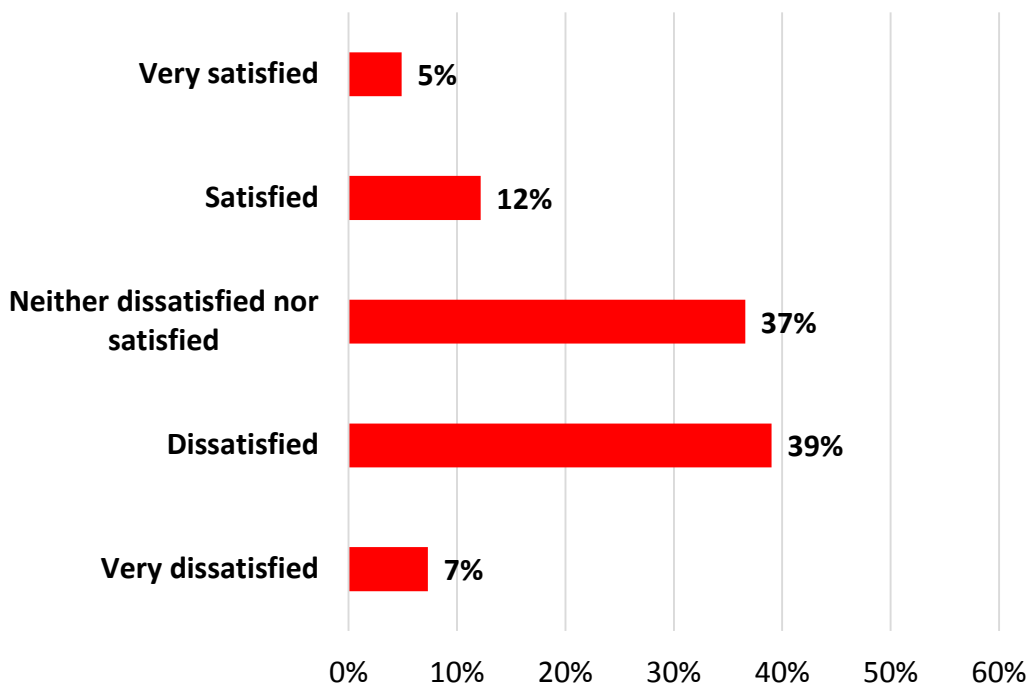


<b>Mean</b>	<b>2.71</b>
<b>Standard deviation</b>	<b>1.05</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

**Figure 27f**

Extent to which the industry is open to suggestions from local community leaders.

(n = 41)



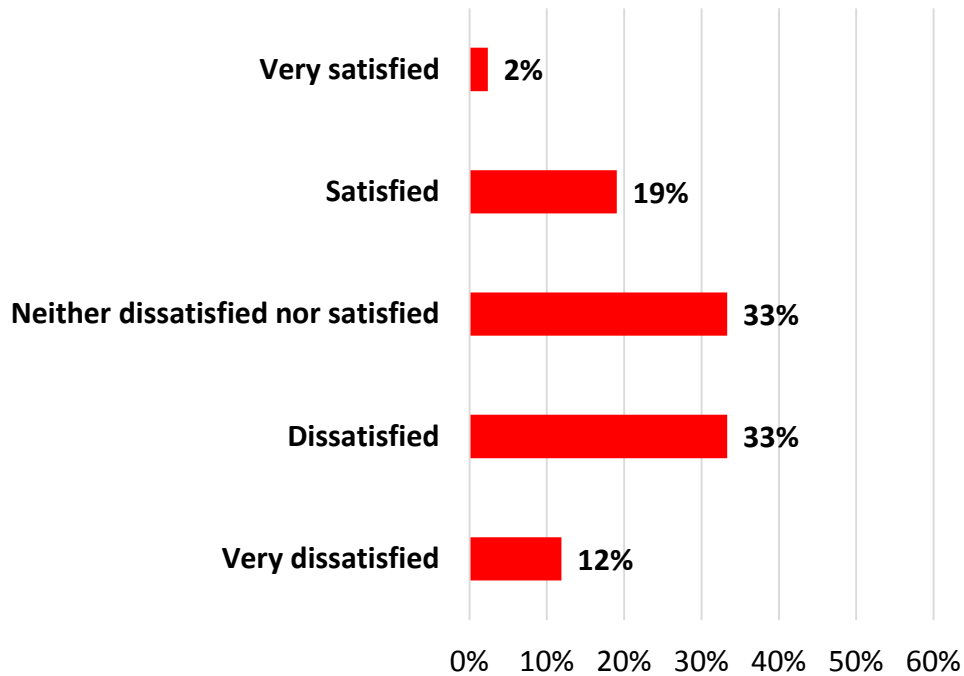
<b>Mean</b>	<b>2.68</b>
<b>Standard deviation</b>	<b>0.96</b>

coding:  
1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied

**Figure 27g**

Extent to which the industry listens to concerns raised by local community residents.

(n = 42)

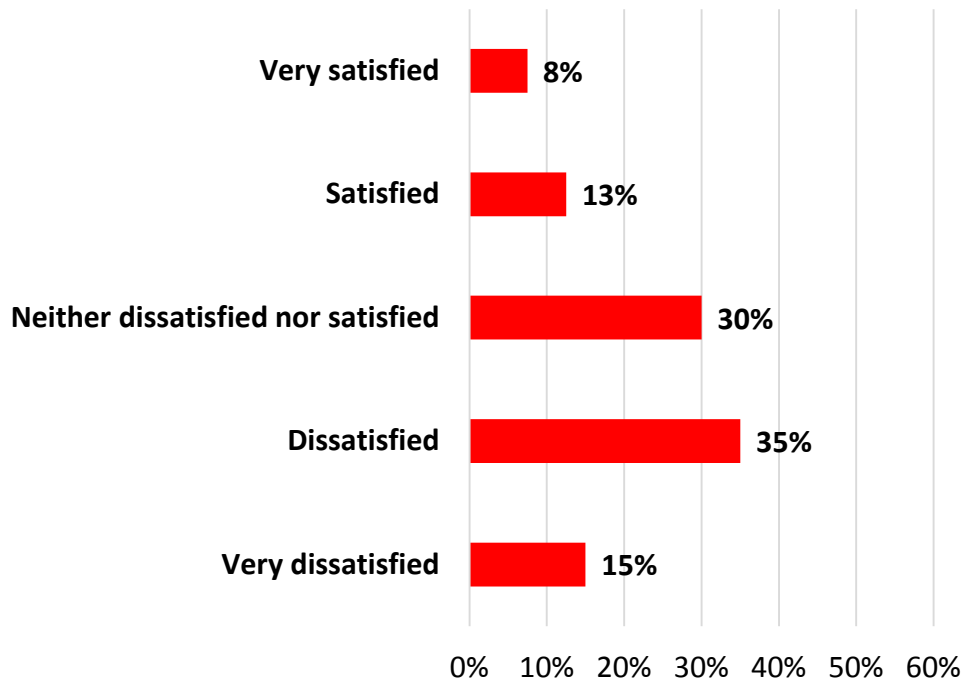


<b>Mean</b>	<b>2.67</b>
<b>Standard deviation</b>	<b>1.00</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

## Figure 27h

Extent to which the industry shares information about its activities with local communities.

(n = 40)

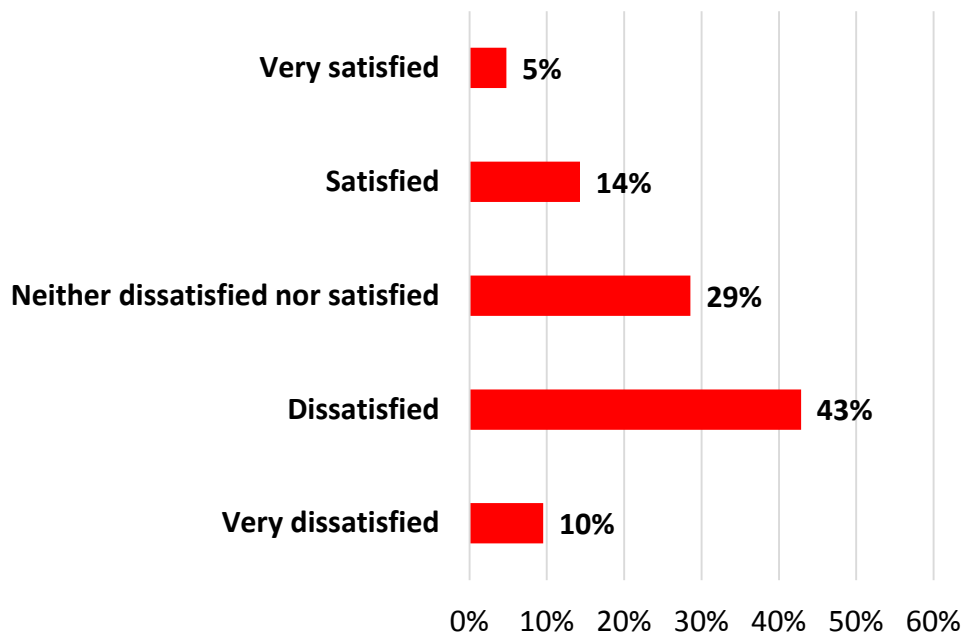


<b>Mean</b>	<b>2.63</b>
<b>Standard deviation</b>	<b>1.13</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

**Figure 27i**

Extent to which the amount of communication with local community residents by the industry is about right.

(n = 42)

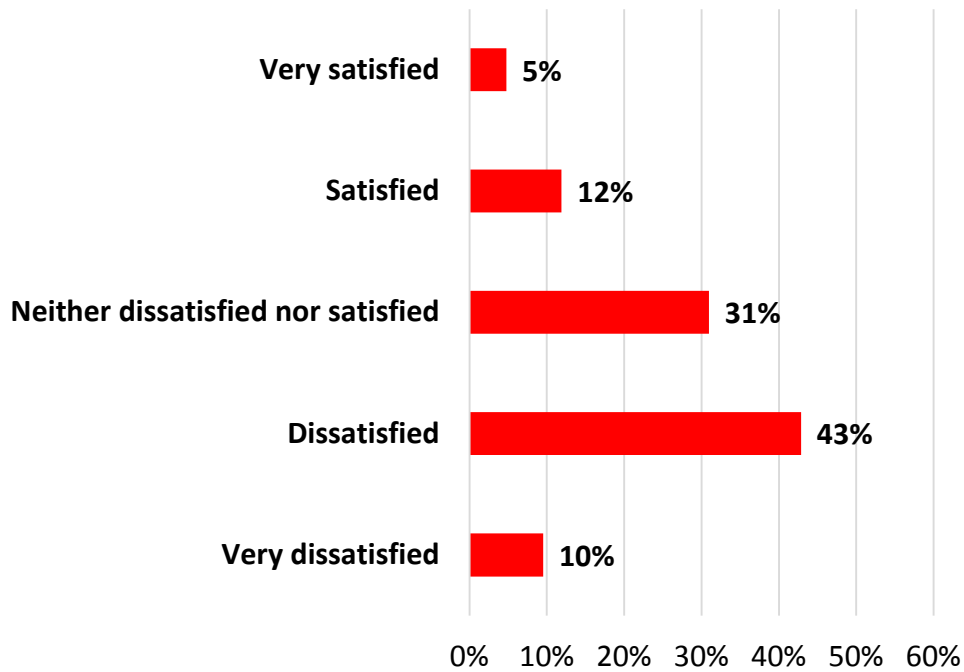


<b>Mean</b>	<b>2.62</b>
<b>Standard deviation</b>	<b>1.01</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

**Figure 27j**

Extent to which the trustworthiness of communication by the industry is about right.

(n = 42)

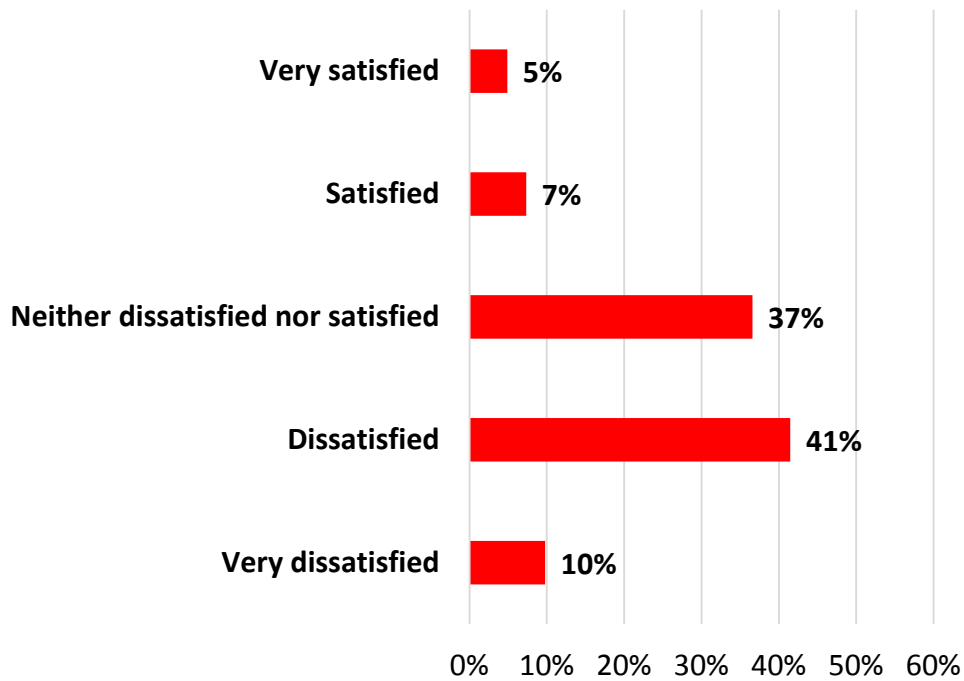


<b>Mean</b>	<b>2.60</b>
<b>Standard deviation</b>	<b>0.99</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

### Figure 27k

Extent to which industry communication with community residents is clear and concise.

(n = 41)

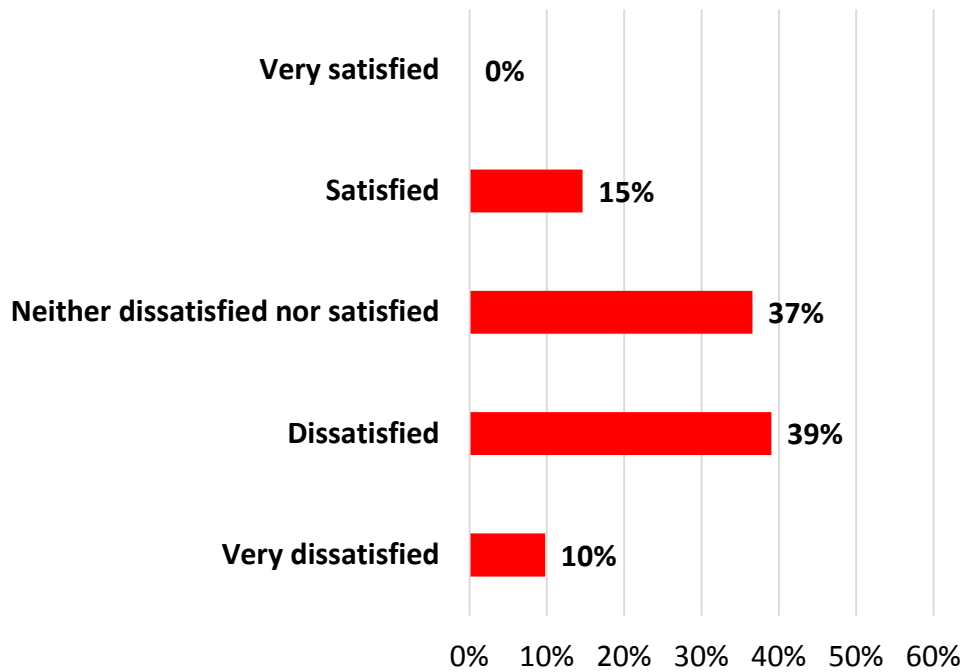


<b>Mean</b>	<b>2.56</b>
<b>Standard deviation</b>	<b>0.95</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	

## Figure 27I

Extent to which the industry anticipates the local community residents' need for information.

(n = 41)



<b>Mean</b>	<b>2.56</b>
<b>Standard deviation</b>	<b>0.87</b>
coding: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; 5 = very satisfied	



## **Section V**

# **Actions Which May or May Not Have Been Taken in Response to the Exploration and Production of Oil and Natural Gas**

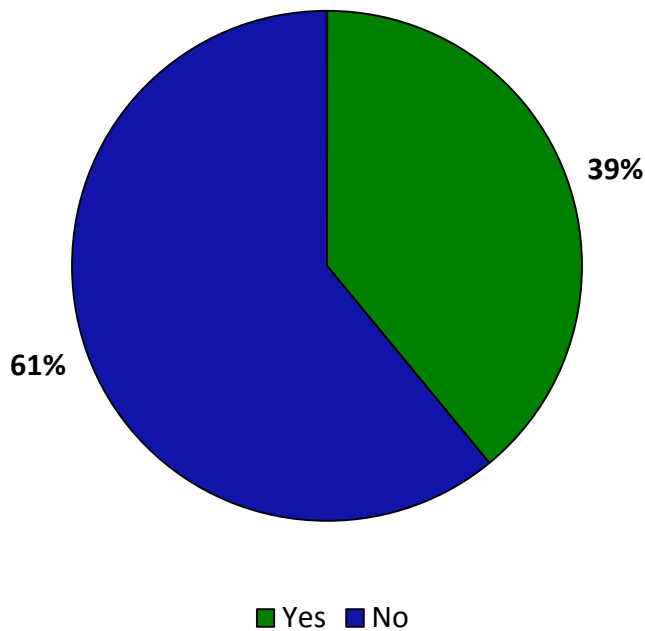
This section deals with eight actions that residents may or may not have taken in response to exploration and production of natural gas in La Salle County. Survey respondents were asked to indicate whether or not they had engaged in such actions. Respondents were then asked to indicate their likelihood of engaging in such actions in the future. The results are summarized below.

Figures 28a through 35a illustrate the extent to which respondents had engaged in such actions. Figures 28b to 35b illustrate the likelihood of engaging in such actions in the future.

## Figure 28a

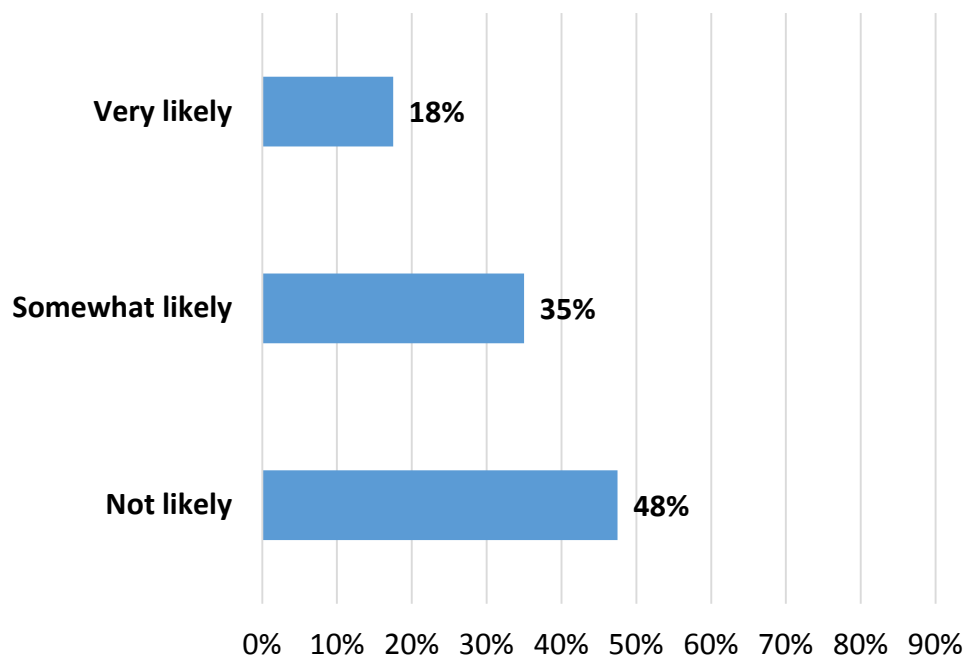
Action: Attended a public meeting to get information and learn more about the drilling and/or production of oil and natural gas.

(n = 41)



**Figure 28b**

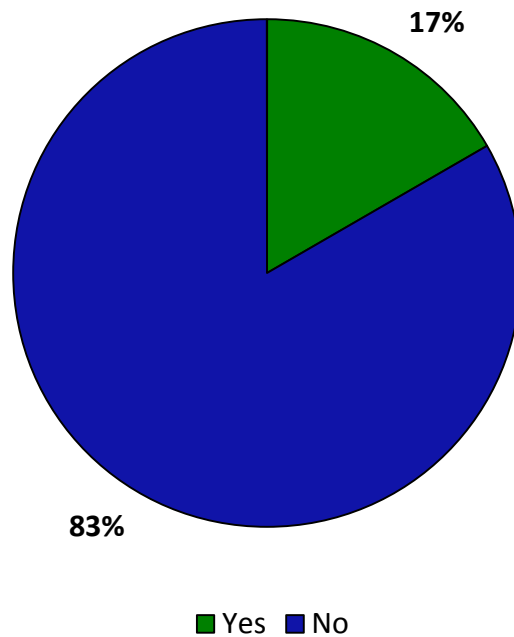
Likelihood of attending public meeting in the future:  
(n = 40)



## Figure 29a

Action: Contacted a local elected official or governmental agency to complain about an oil and natural gas drilling and/or production issue.

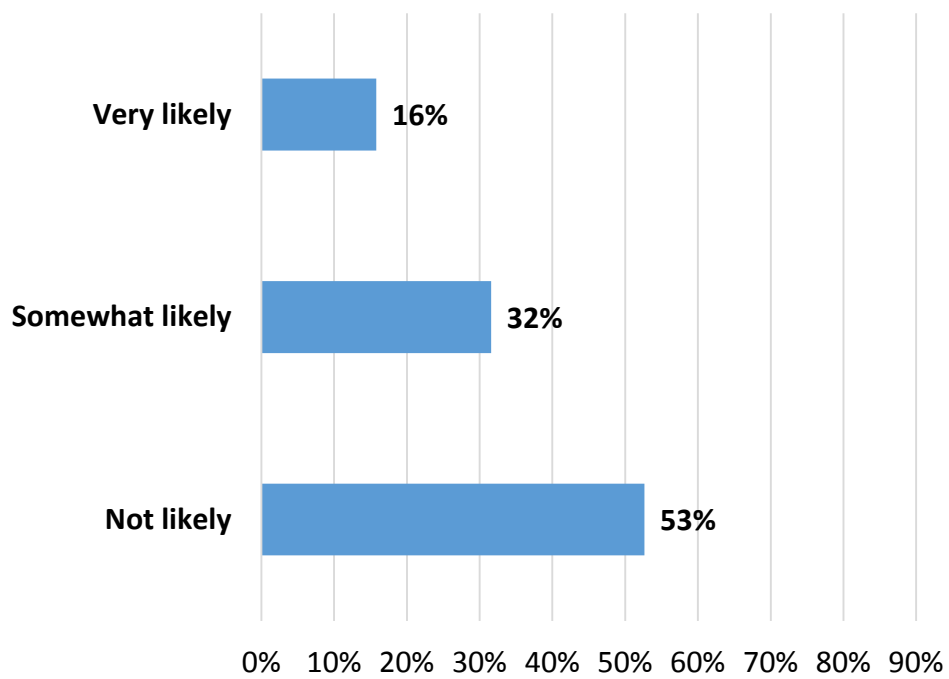
(n = 42)



**Figure 29b**

Likelihood of contacting a local elected official or government agency in the future:

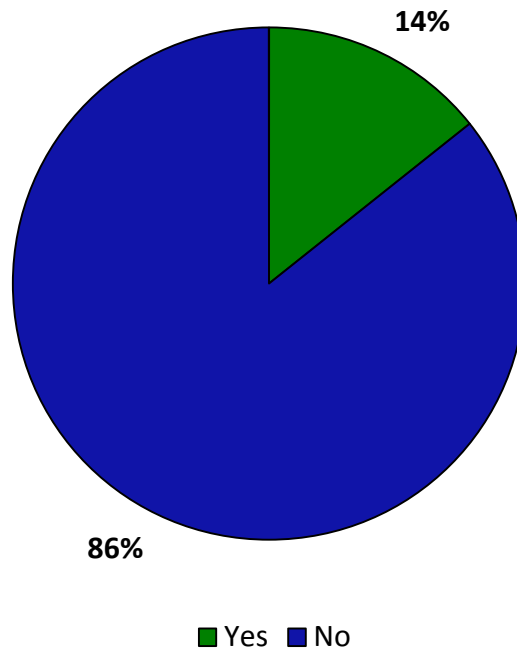
(n = 38)



### Figure 30a

Action: Voted FOR a political candidate because of his/her position on the drilling and/or production of oil and natural gas.

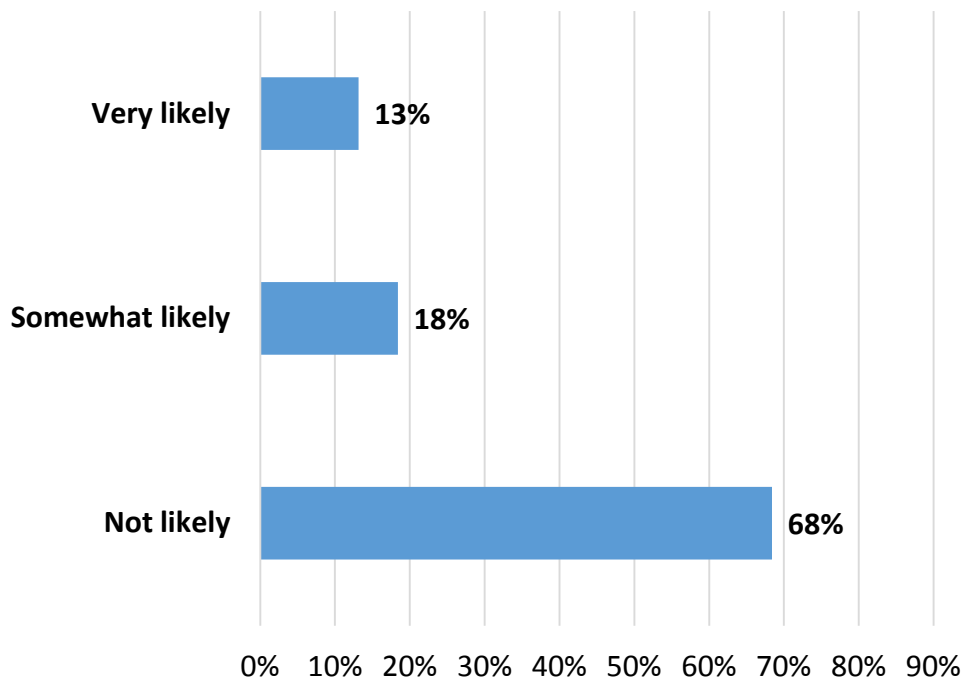
(n = 42)



**Figure 30b**

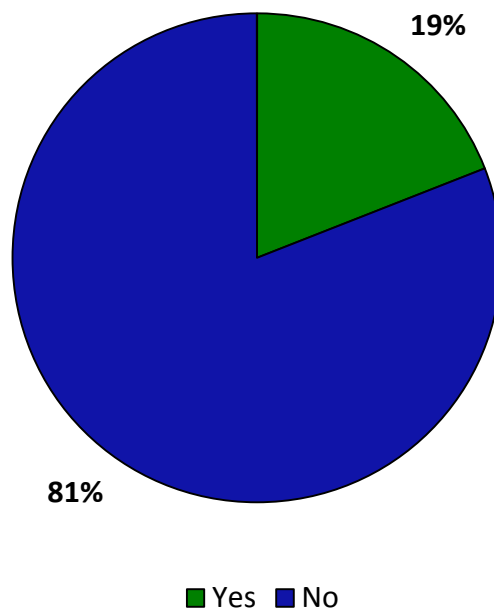
Likelihood of voting FOR a political candidate in  
the future:

(n = 38)



## Figure 31a

Action: Voted AGAINST a political candidate because of his/her position on the drilling and/or production of oil and natural gas.  
(n = 42)

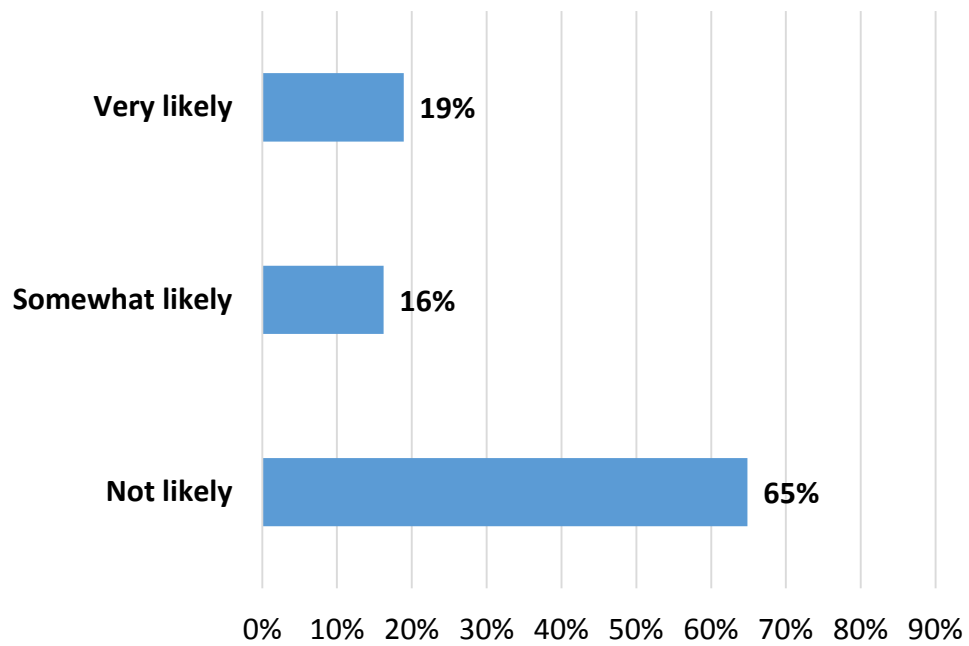




**Figure 31b**

Likelihood of voting AGAINST a political candidate in the future:

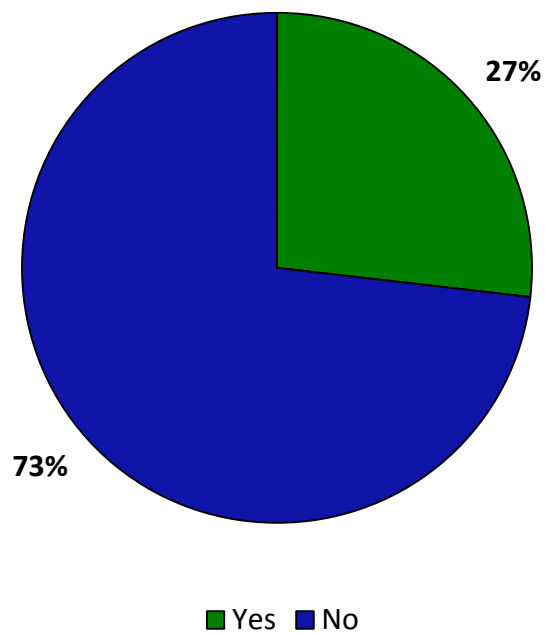
(n = 37)



## Figure 32a

Action: Attended an energy industry-sponsored meeting to get information and learn more about the exploration and/or production of oil and natural gas.

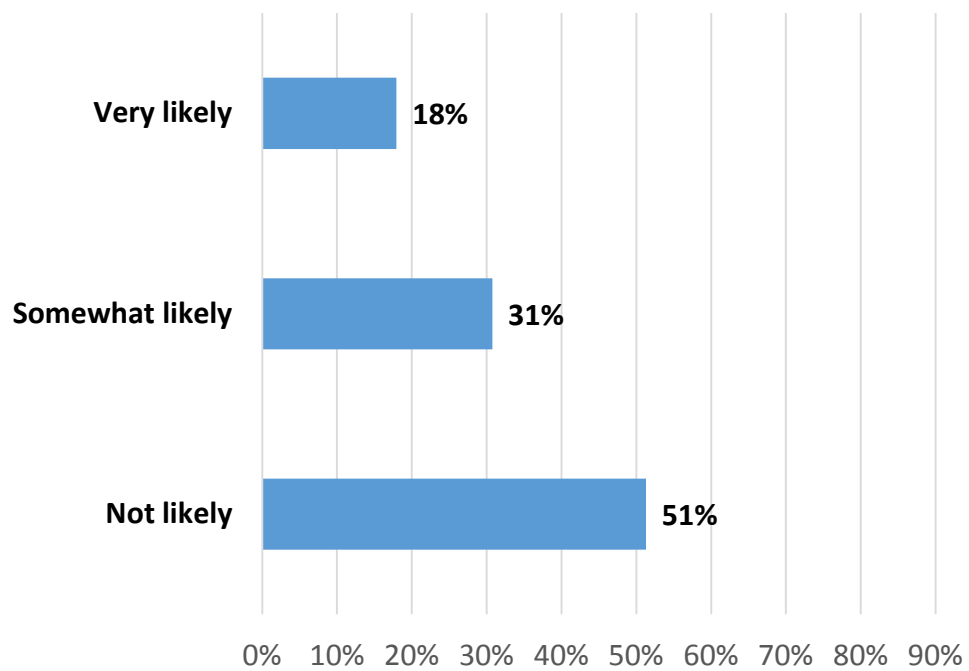
(n = 41)



**Figure 32b**

Likelihood of attending an energy industry-sponsored meeting in the future:

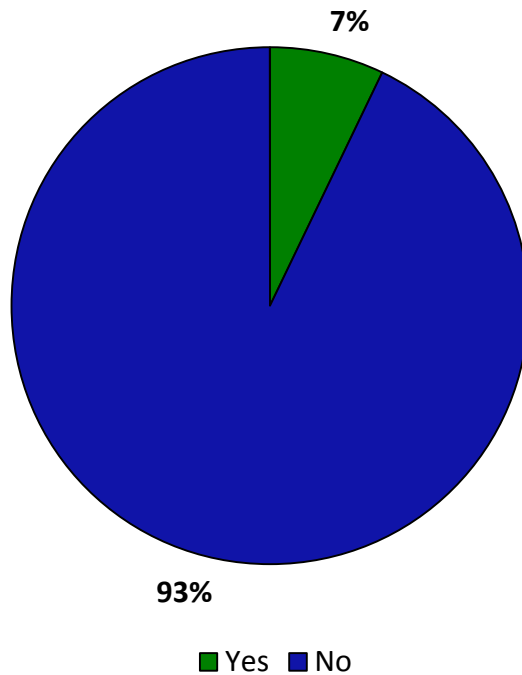
(n = 39)



### Figure 33a

Action: Attended a public meeting to **OPPOSE** the exploration and/or production of oil and natural gas.

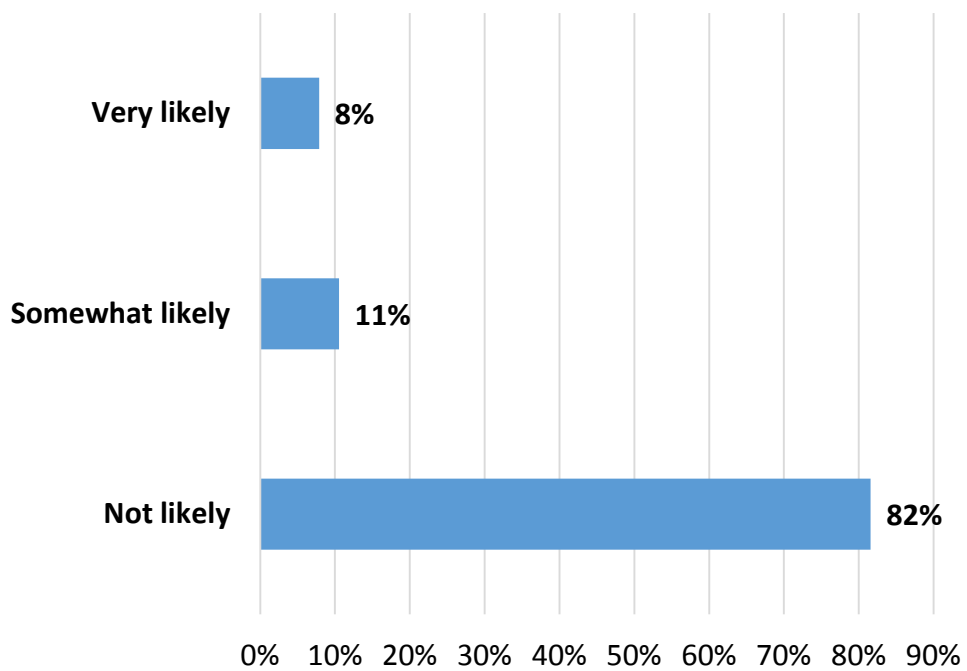
(n = 42)



### Figure 33b

Likelihood of attending a public meeting to  
OPPOSE oil and gas in the future:

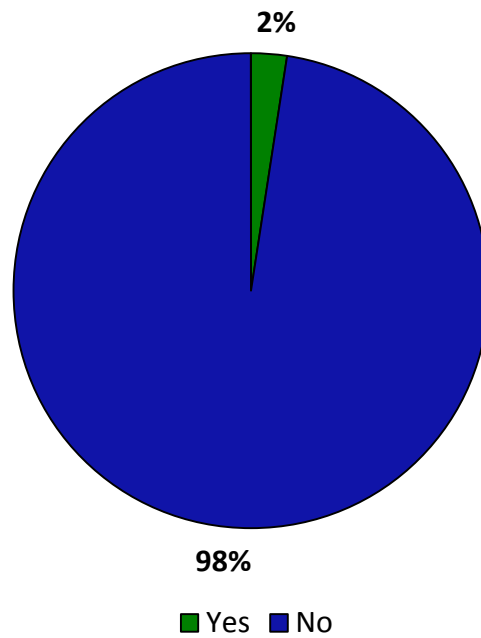
(n = 38)



## Figure 34a

Action: Attended a public meeting to  
SUPPORT the exploration and/or  
production of oil and natural gas.

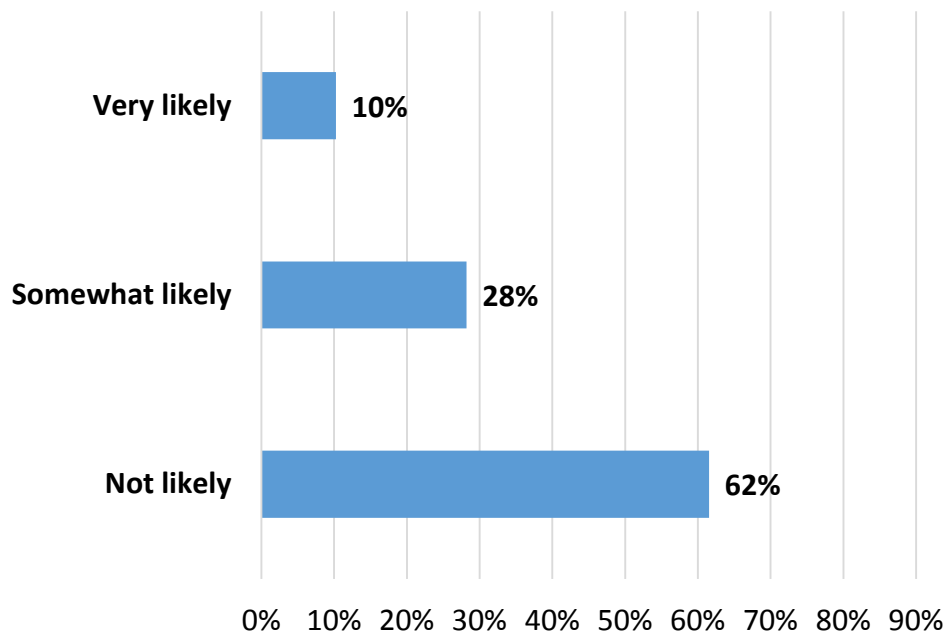
(n = 41)



**Figure 34b**

Likelihood of attending a public meeting to  
SUPPORT oil and gas in the future:

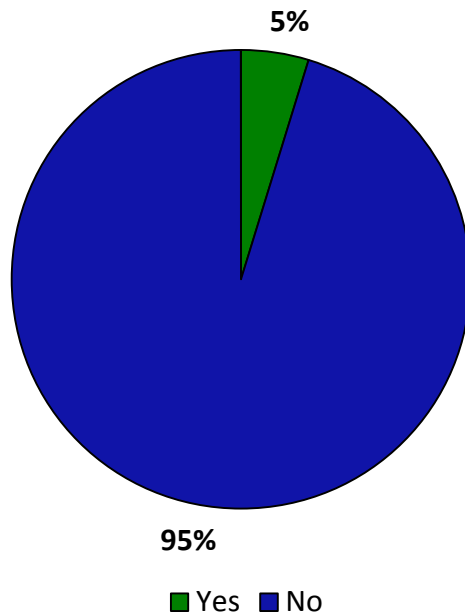
(n = 39)



## Figure 35a

Action: Wrote and mailed a letter to the editor of your local newspaper OPPOSING the continued exploration and/or production of oil and natural gas.

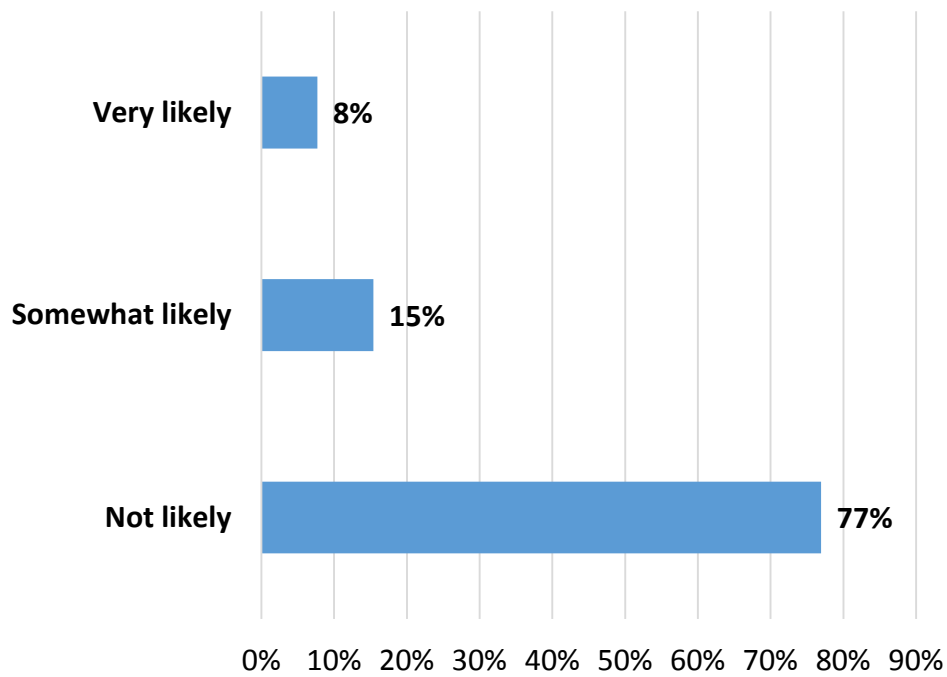
(n = 42)





### Figure 35b

Likelihood of writing a letter to local newspaper to OPPOSE oil and gas in the future:  
(n = 39)



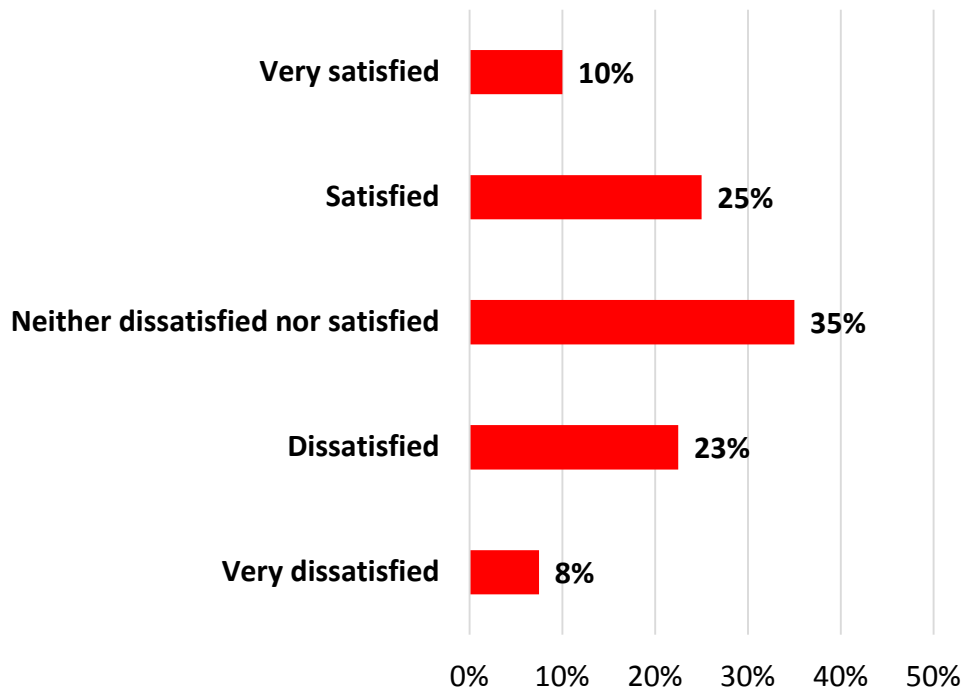
## **Section VI**

# **Satisfaction with Communication**

Figures 36a through 36g summarize respondents' levels of satisfaction regarding communication involving oil and gas industry activities.

**Figure 36a**

*Level of satisfaction:* Freedom to express my opinion about oil and gas development  
(n = 40)



**Mean** 3.08

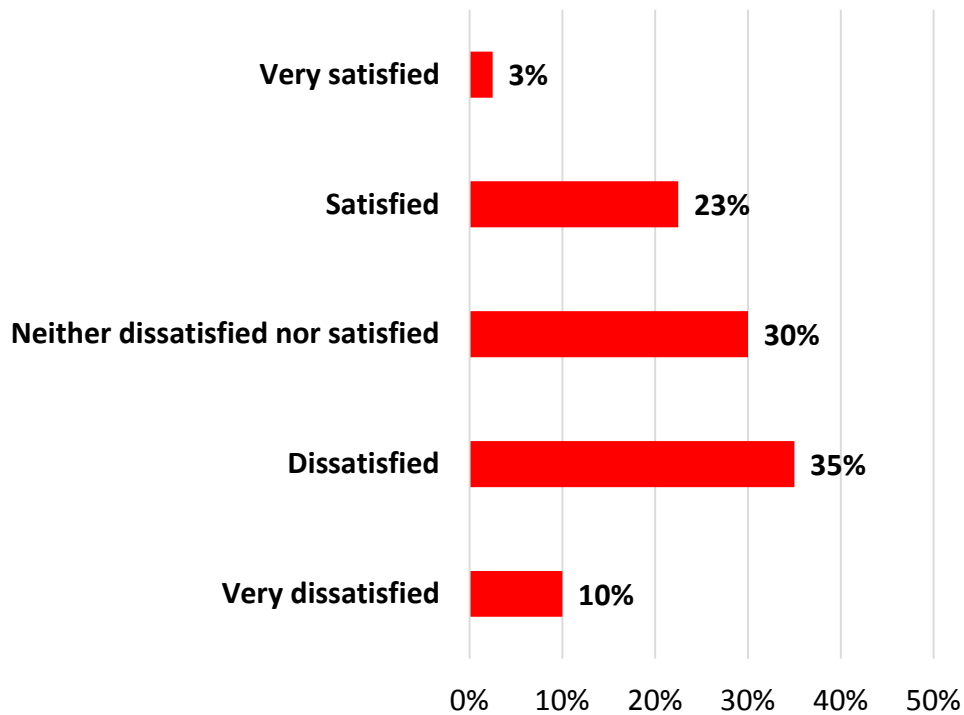
**Standard deviation** 1.10

coding:

1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied

**Figure 36b**

*Level of satisfaction:* Availability of information about oil and gas development  
(n = 40)

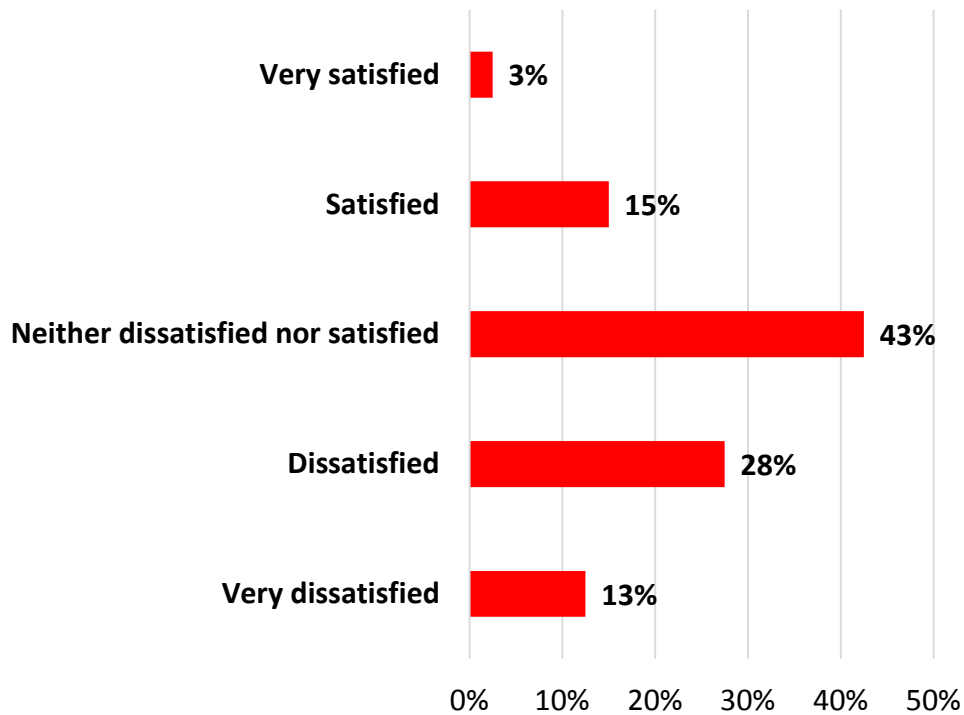


<b>Mean</b>	<b>2.73</b>
<b>Standard deviation</b>	<b>1.01</b>

coding:  
1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied

**Figure 36c**

*Level of satisfaction:* Oil and gas industry officials getting information out to the public  
(n = 40)

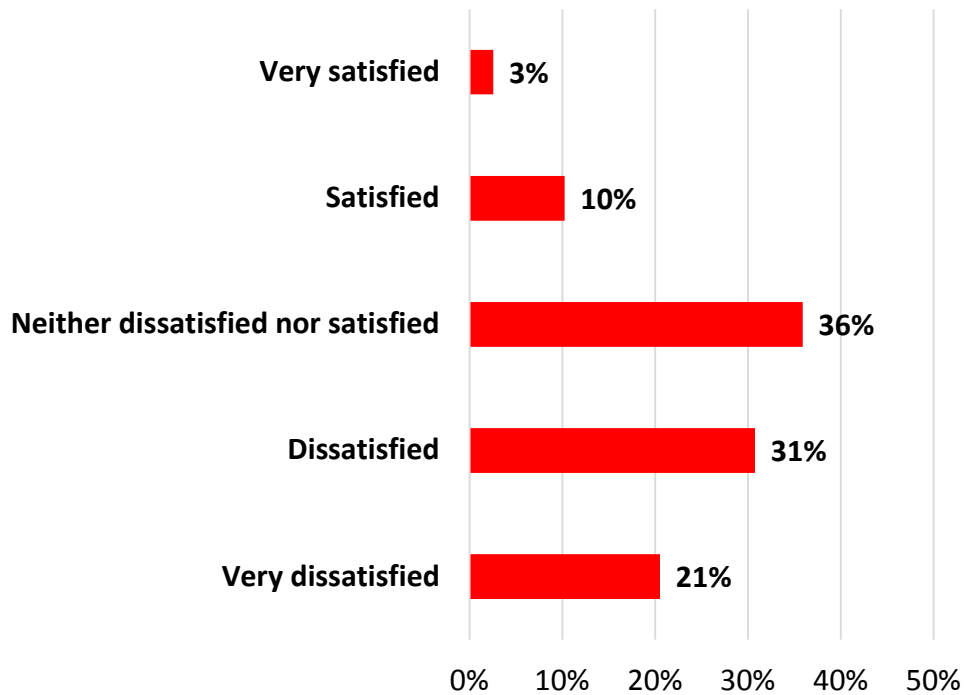


<b>Mean</b>	<b>2.68</b>
<b>Standard deviation</b>	<b>0.97</b>
coding: 1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied	

## Figure 36d

Level of satisfaction: Fairness of the communication process (*all citizens' voices and concerns are heard and considered*)

(n = 39)



**Mean**

**2.44**

**Standard deviation**

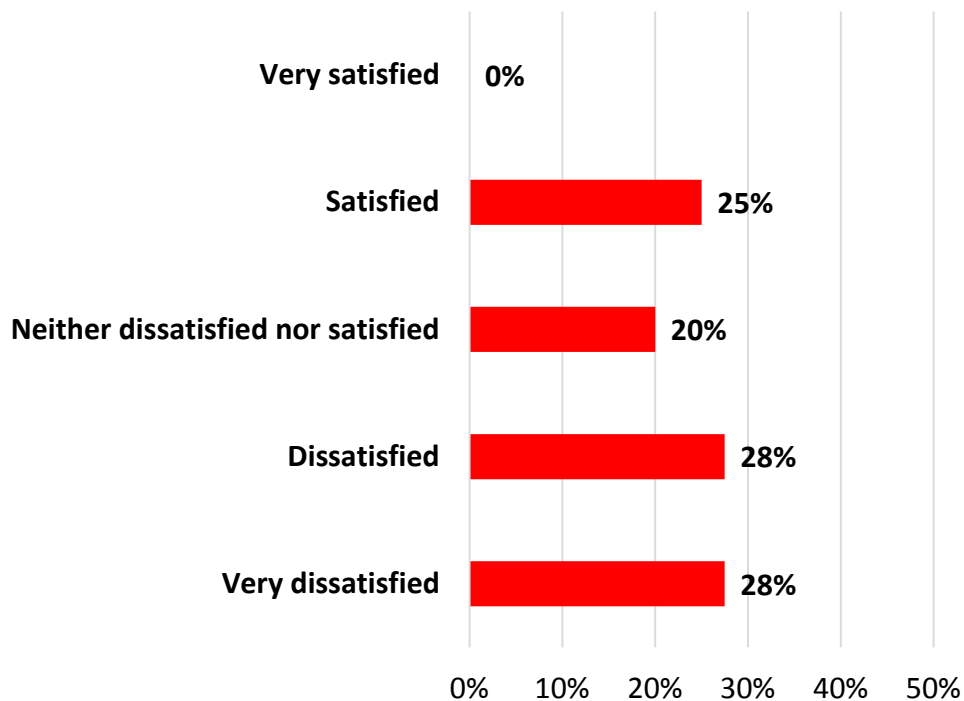
**1.02**

coding:

1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied

### Figure 36e

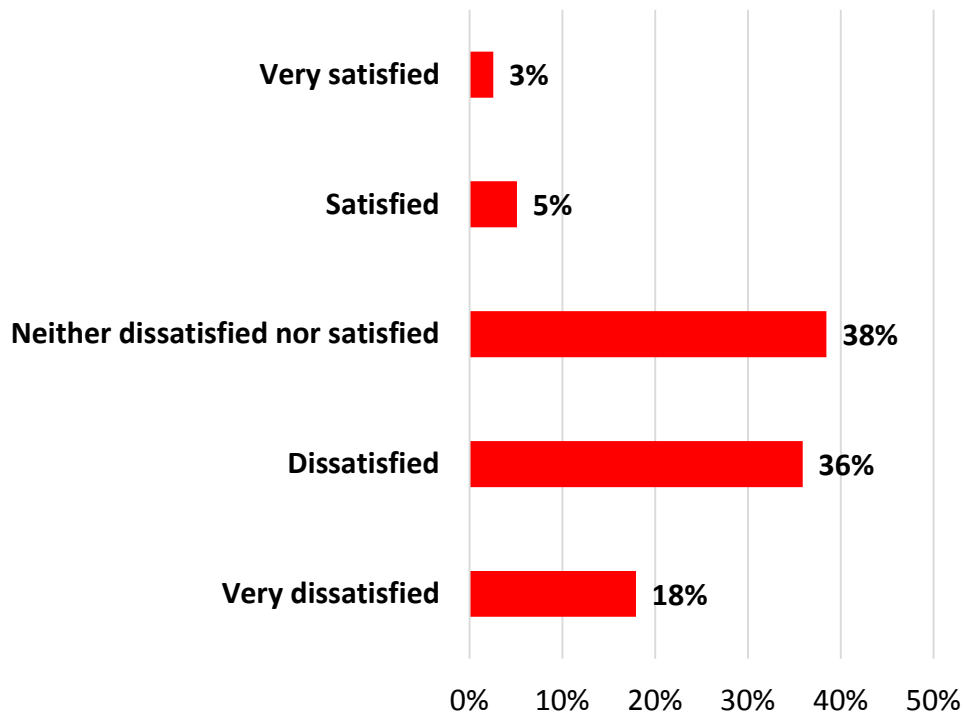
Level of satisfaction: Effectiveness of county government in communicating information about oil and gas development  
(n = 40)



<b>Mean</b>	<b>2.43</b>
<b>Standard deviation</b>	<b>1.15</b>
coding: 1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied	

**Figure 36f**

*Level of satisfaction:* Oil and gas industry officials soliciting input from the public  
(n = 39)



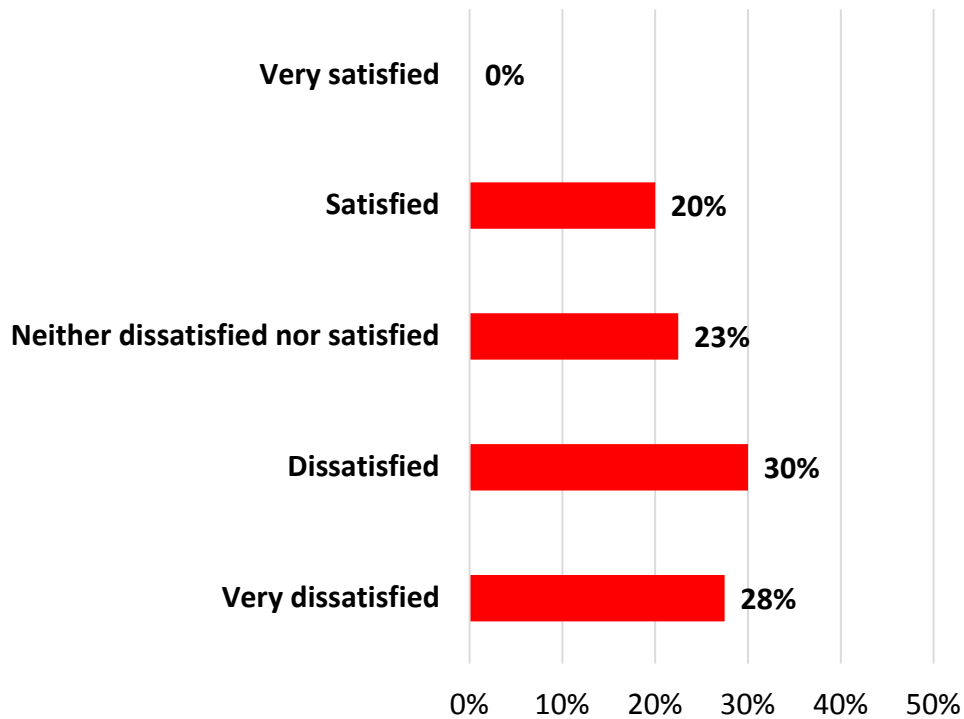
<b>Mean</b>	<b>2.38</b>
<b>Standard deviation</b>	<b>0.94</b>
coding: 1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied	



## Figure 36g

Level of satisfaction: Effectiveness of city government in communicating information about oil and gas development

(n = 40)



<b>Mean</b>	<b>2.35</b>
<b>Standard deviation</b>	<b>1.10</b>
coding: 1 = Very dissatisfied; 2 = Dissatisfied; 3 = Neither dissatisfied nor satisfied; 4 = Satisfied; 5 = Very satisfied	

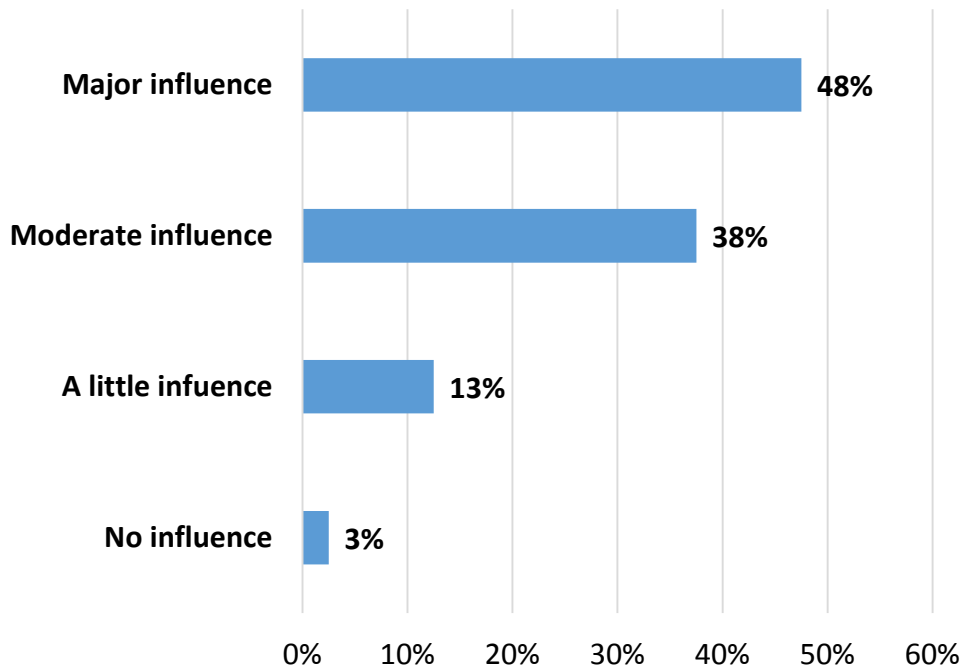
## Section VII

# Management Decisions

Figures 37a through 46b summarize the amounts of influence respondents believe selected groups/organizations (a) should have and (b) actually have on the management decisions pertaining to the oil and natural gas development occurring in/near their communities. Figures 37a through 46a illustrate the perceived level of influence each group/organization should have on management decisions. Figures 37b through 46b illustrate the perceived level of influence each group/organization actually has on management decisions.

**Figure 37a**

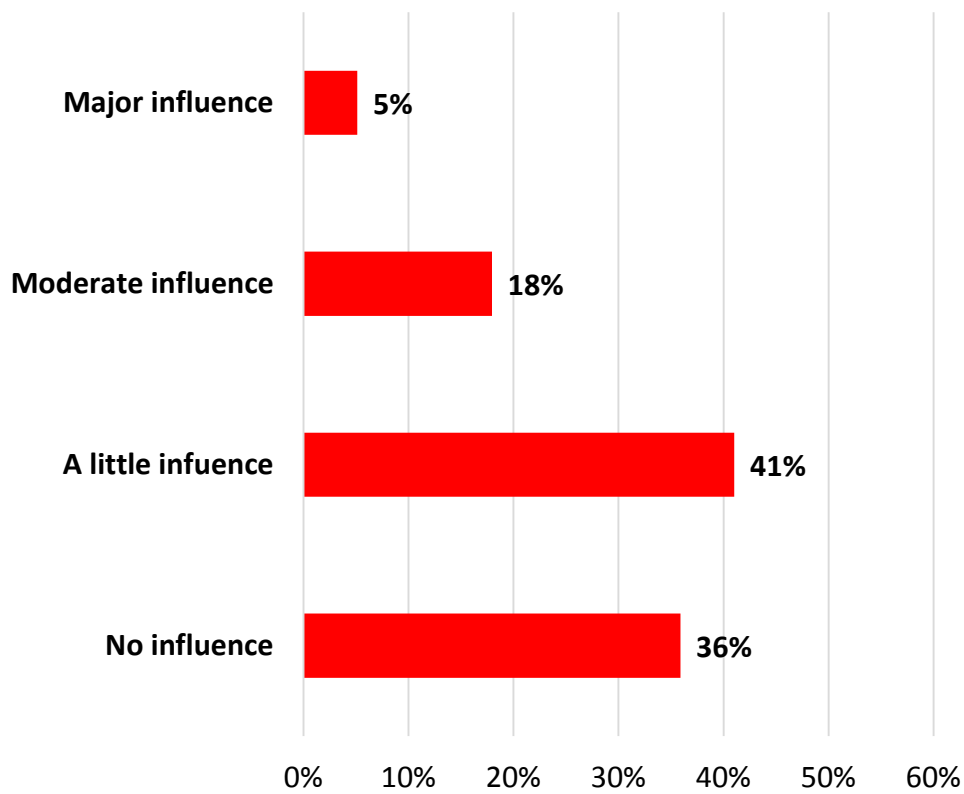
*Perceived level of influence should have:*  
**Residents of local affected communities**  
(n = 40)



<b>Mean</b>	<b>2.30</b>
<b>Standard deviation</b>	<b>0.79</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 37b**

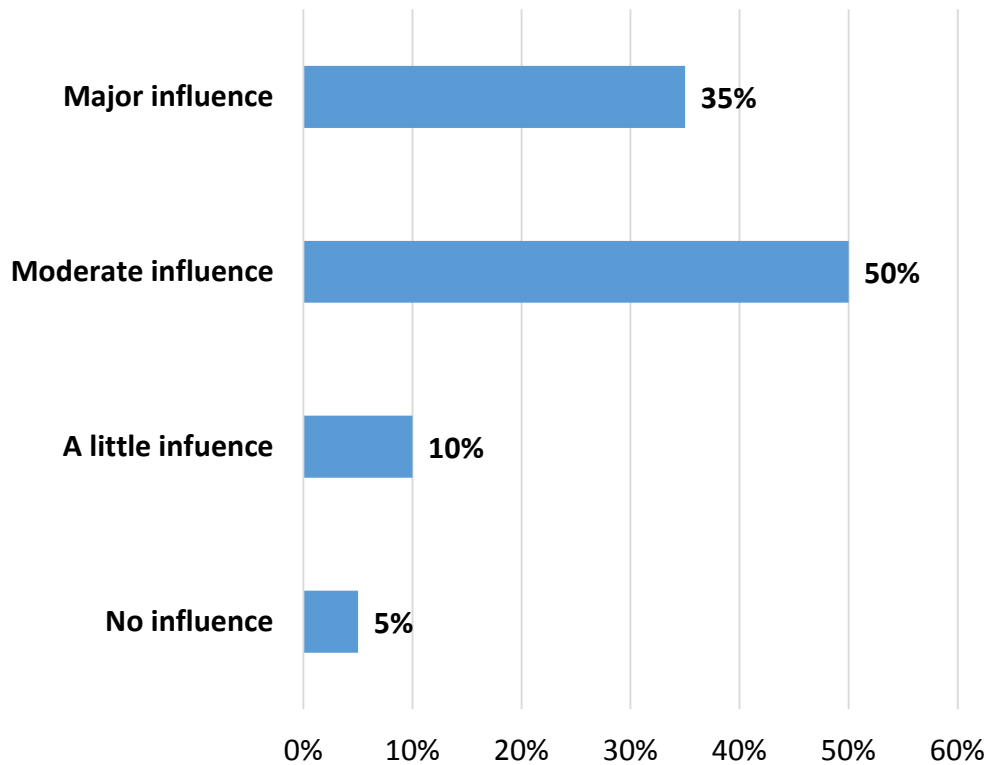
*Perceived level of influence actually have:*  
**Residents of local affected communities**  
(n = 39)



<b>Mean</b>	<b>0.92</b>
<b>Standard deviation</b>	<b>0.87</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 38a**

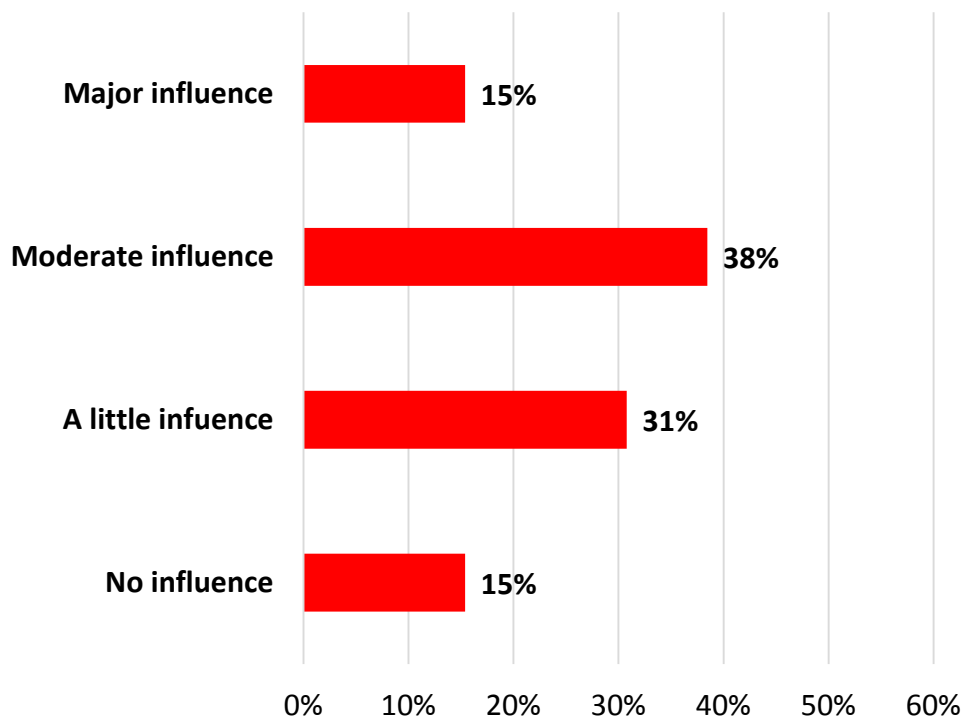
*Perceived level of influence should have:*  
**Officials of local affected communities**  
(n = 40)



<b>Mean</b>	<b>2.15</b>
<b>Standard deviation</b>	<b>0.80</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 38b**

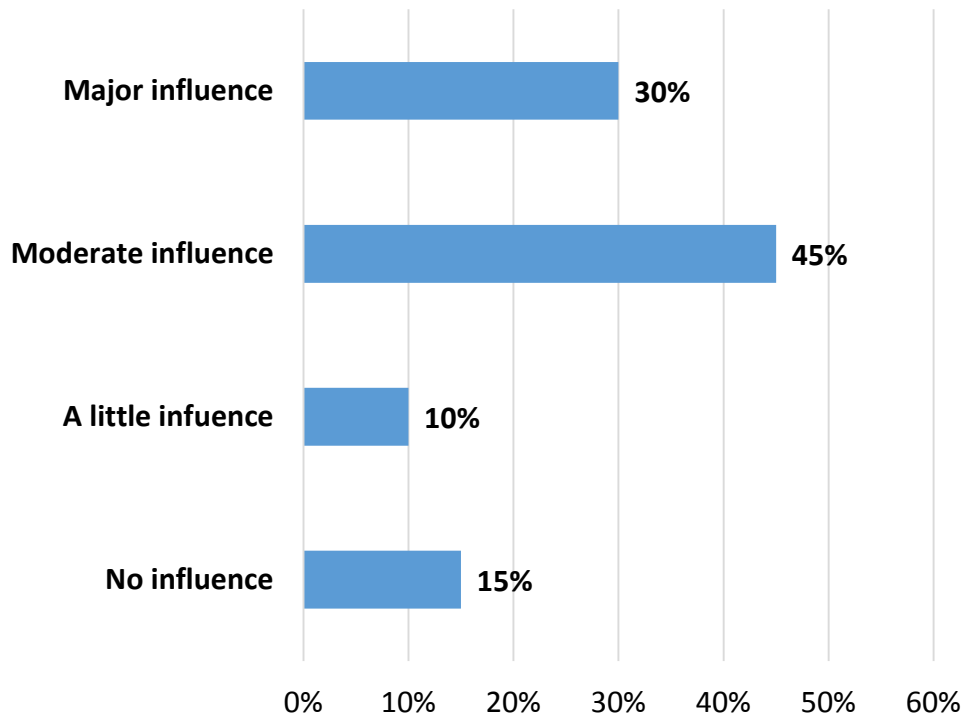
*Perceived level of influence actually have:*  
**Officials of local affected communities**  
(n = 39)



<b>Mean</b>	<b>1.54</b>
<b>Standard deviation</b>	<b>0.94</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 39a**

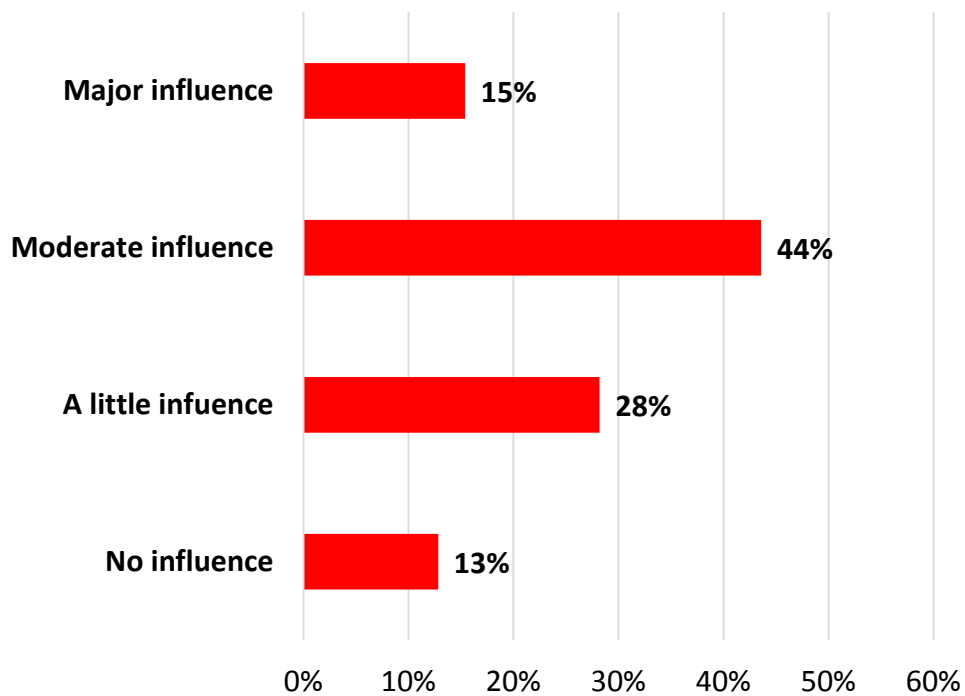
*Perceived level of influence should have:*  
**Environmental interest groups**  
(n = 40)



<b>Mean</b>	<b>1.90</b>
<b>Standard deviation</b>	<b>1.01</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 39b**

*Perceived level of influence actually have:*  
**Environmental interest groups**  
(n = 39)



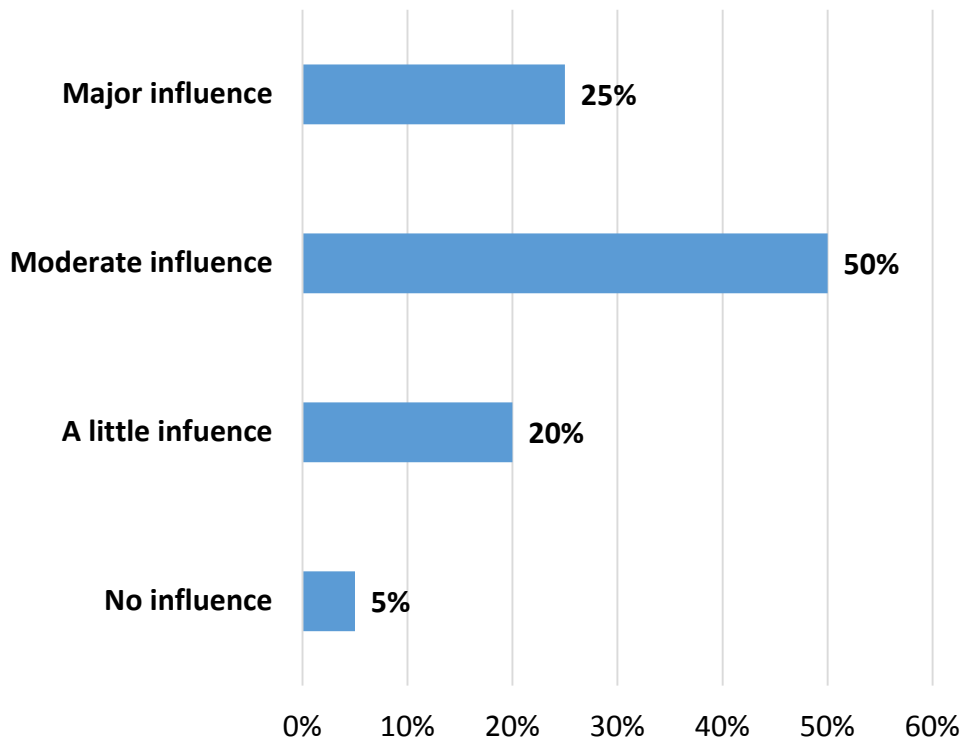
<b>Mean</b>	<b>1.62</b>
<b>Standard deviation</b>	<b>0.91</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	



## Figure 40a

*Perceived level of influence should have:*  
Commercial resource industries (agriculture,  
timber, etc.)

(n = 40)

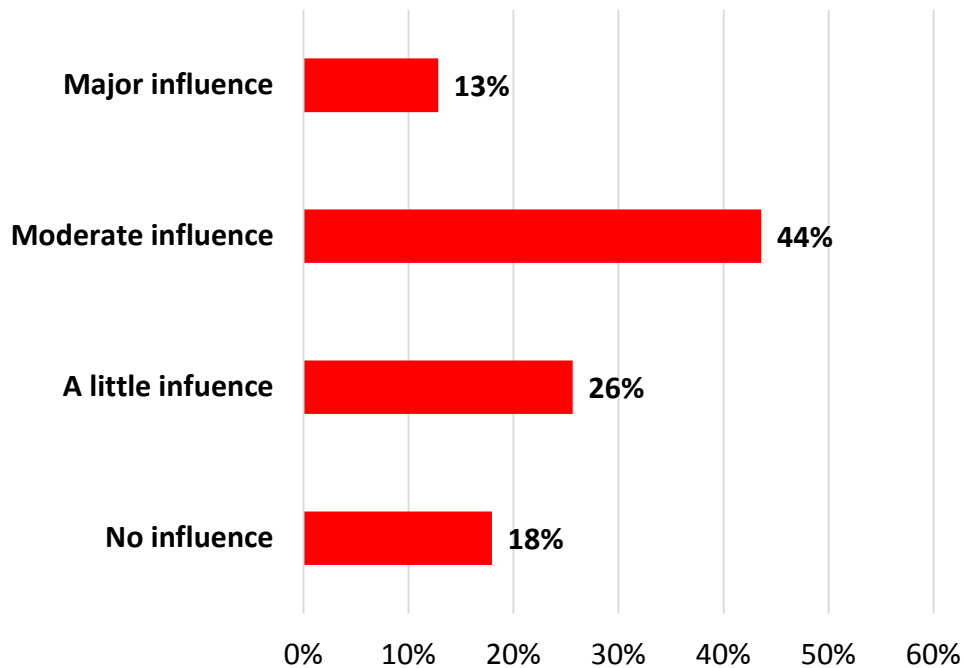


<b>Mean</b>	<b>1.95</b>
<b>Standard deviation</b>	<b>0.82</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

## Figure 40b

*Perceived level of influence actually have:*  
Commercial resource industries (agriculture,  
timber, etc.)

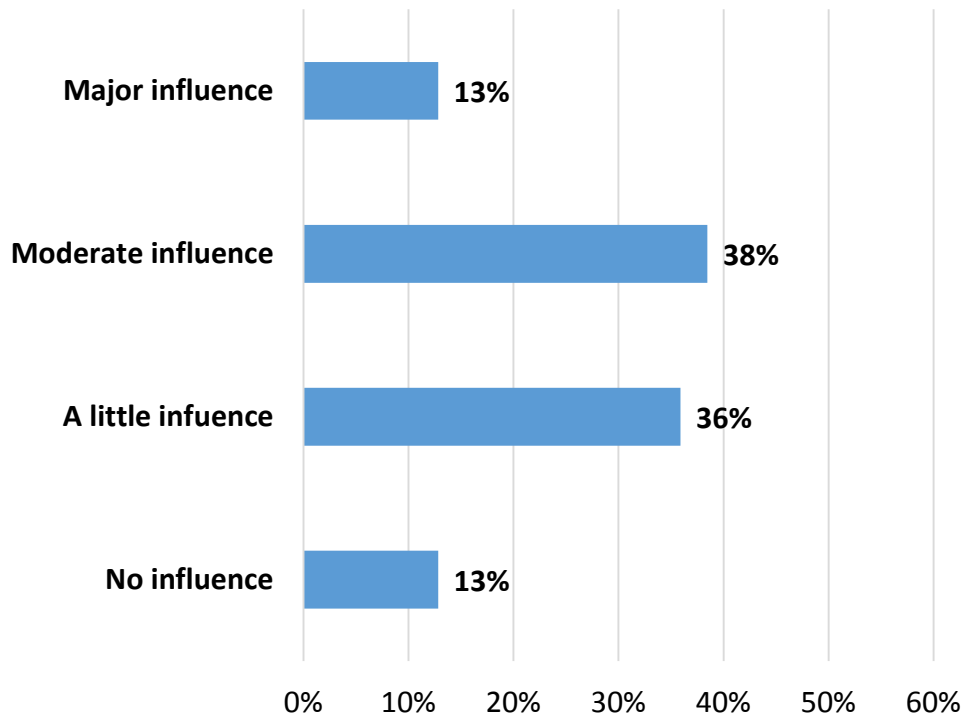
(n = 39)



<b>Mean</b>	<b>1.51</b>
<b>Standard deviation</b>	<b>0.94</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 41a**

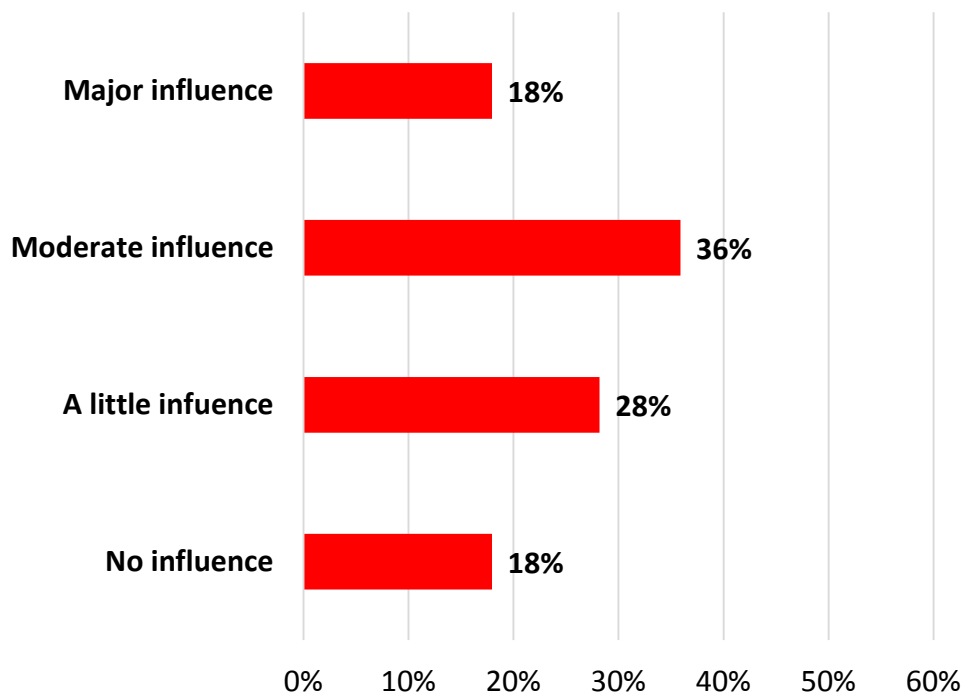
*Perceived level of influence should have:*  
**Statewide public opinion**  
(n = 39)



<b>Mean</b>	<b>1.51</b>
<b>Standard deviation</b>	<b>0.89</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

### Figure 41b

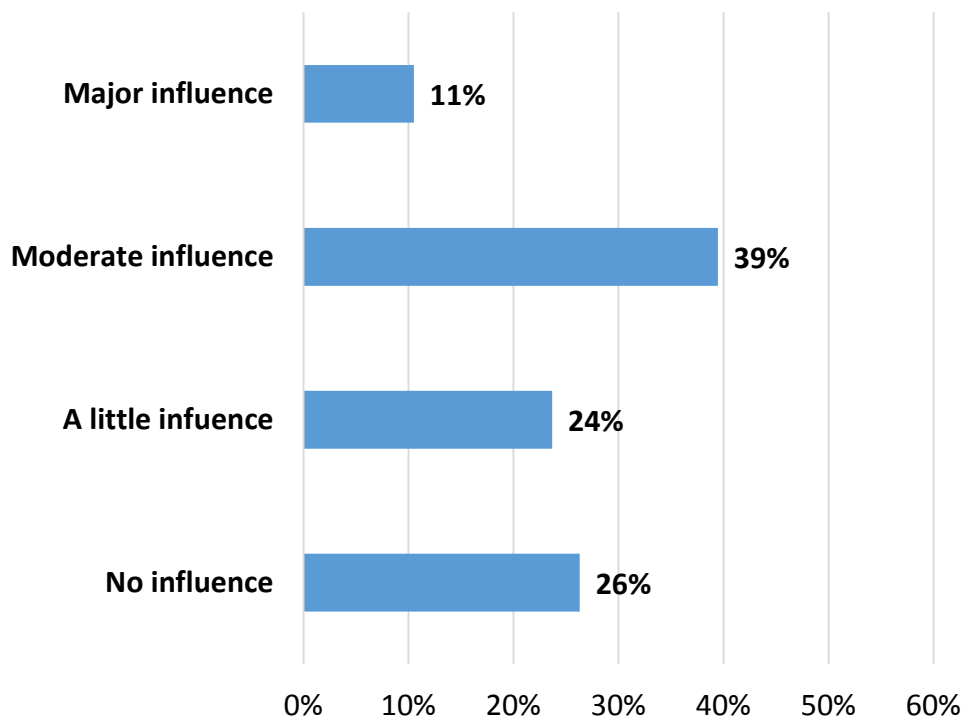
*Perceived level of influence actually have:*  
**Statewide public opinion**  
(n = 39)



<b>Mean</b>	<b>1.54</b>
<b>Standard deviation</b>	<b>1.00</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 42a**

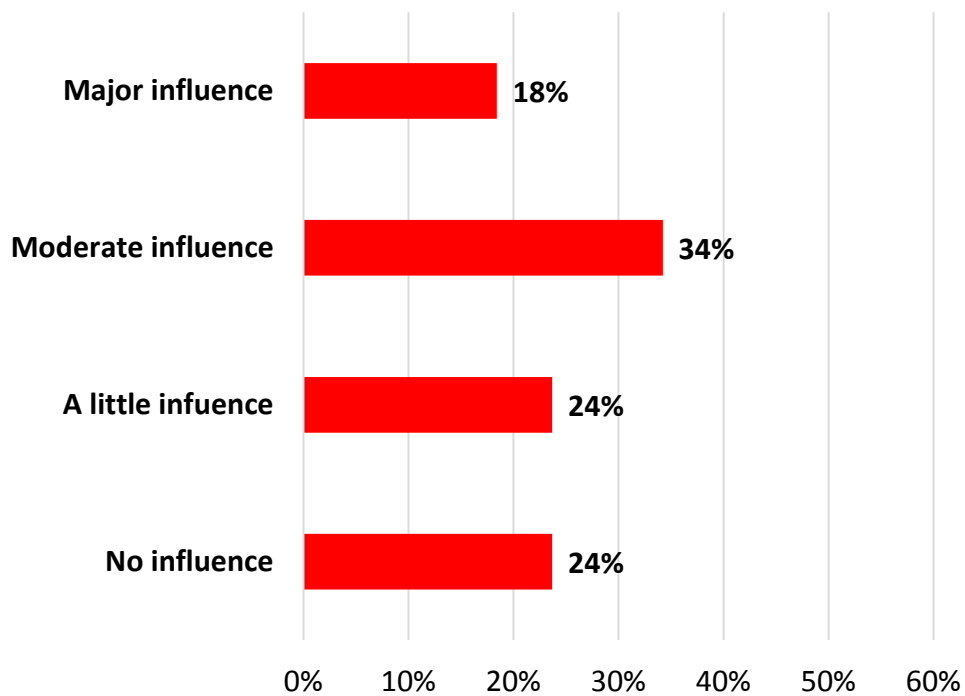
*Perceived level of influence should have:*  
**National public opinion**  
(n = 38)



<b>Mean</b>	<b>1.34</b>
<b>Standard deviation</b>	<b>0.99</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

## Figure 42b

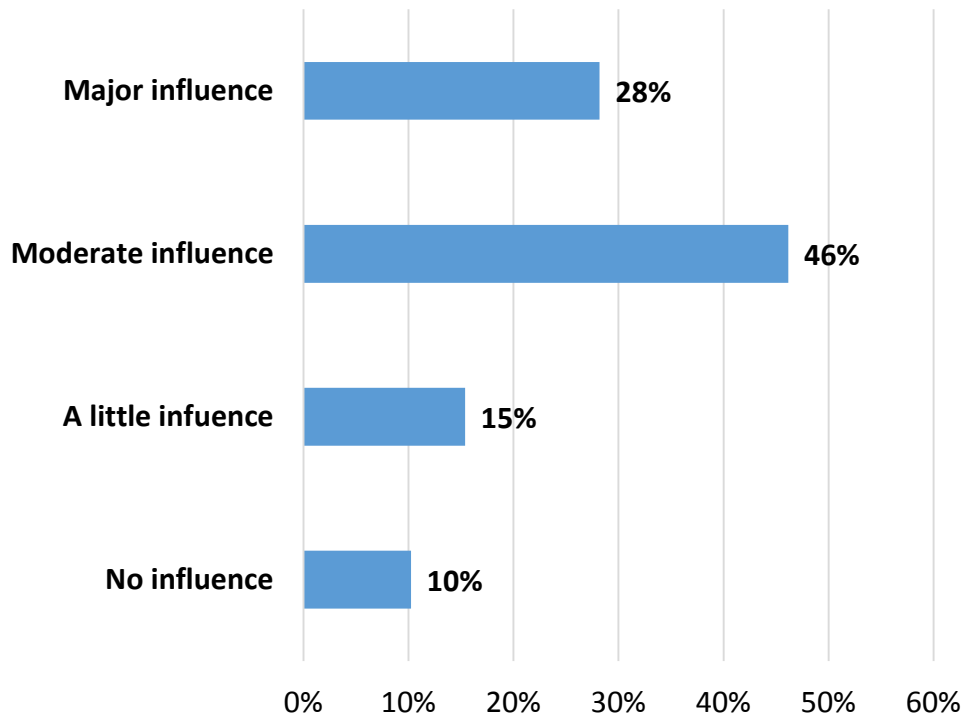
*Perceived level of influence actually have:*  
**National public opinion**  
(n = 38)



<b>Mean</b>	<b>1.47</b>
<b>Standard deviation</b>	<b>1.06</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 43a**

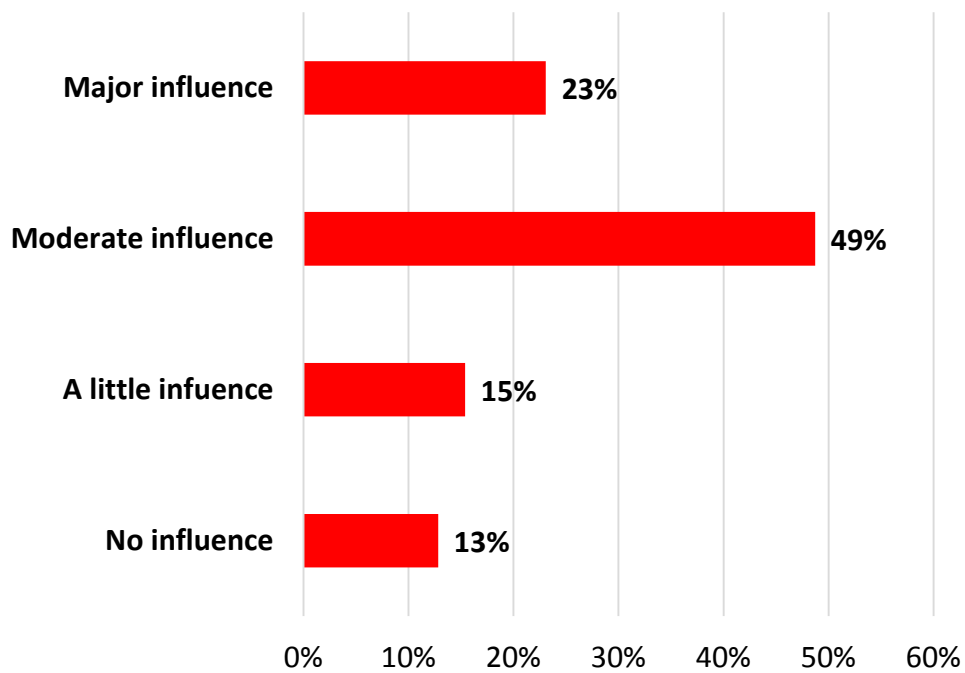
*Perceived level of influence should have:*  
**State natural resource agencies**  
(n = 39)



<b>Mean</b>	<b>1.92</b>
<b>Standard deviation</b>	<b>0.93</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 43b**

*Perceived level of influence actually have:*  
**State natural resource agencies**  
(n = 39)



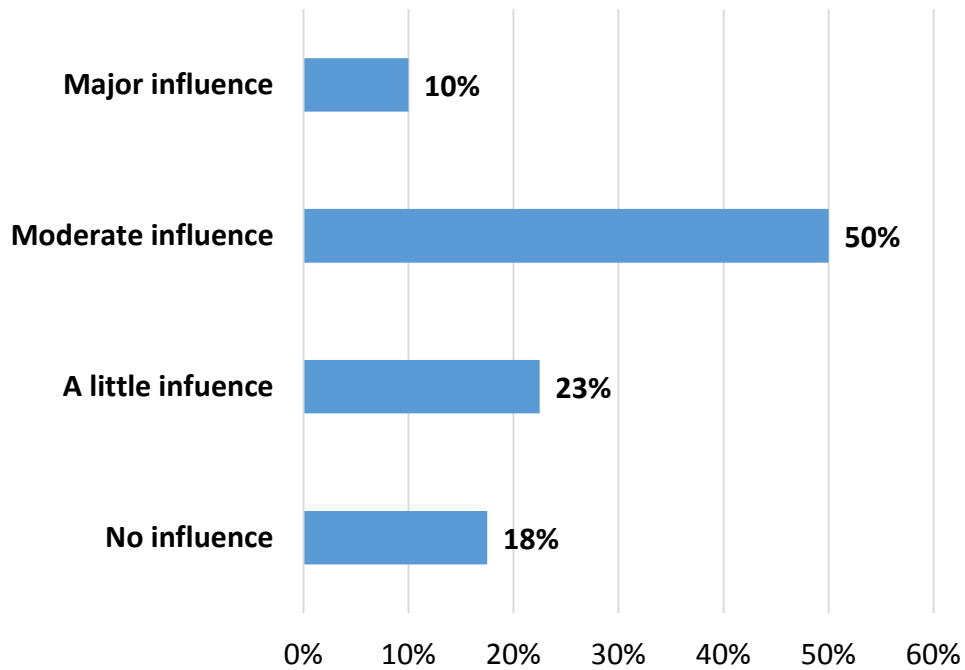
<b>Mean</b>	<b>1.82</b>
<b>Standard deviation</b>	<b>0.94</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	



**Figure 44a**

*Perceived level of influence should have:*  
**Federal natural resource agencies**

(n = 40)

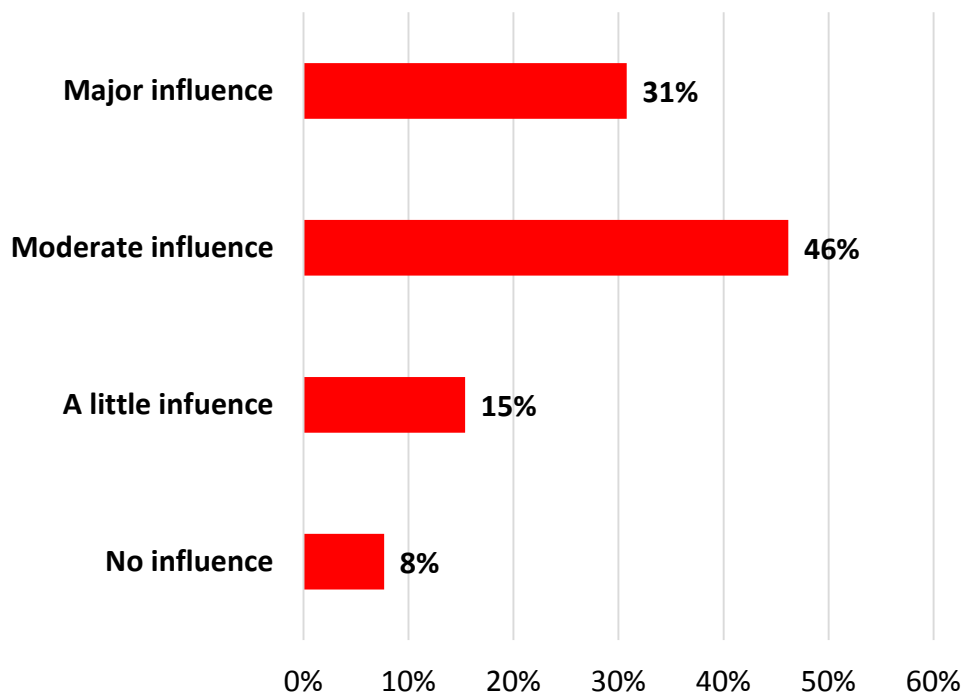


<b>Mean</b>	<b>1.53</b>
<b>Standard deviation</b>	<b>0.91</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 44b**

*Perceived level of influence actually have:*  
**Federal natural resource agencies**

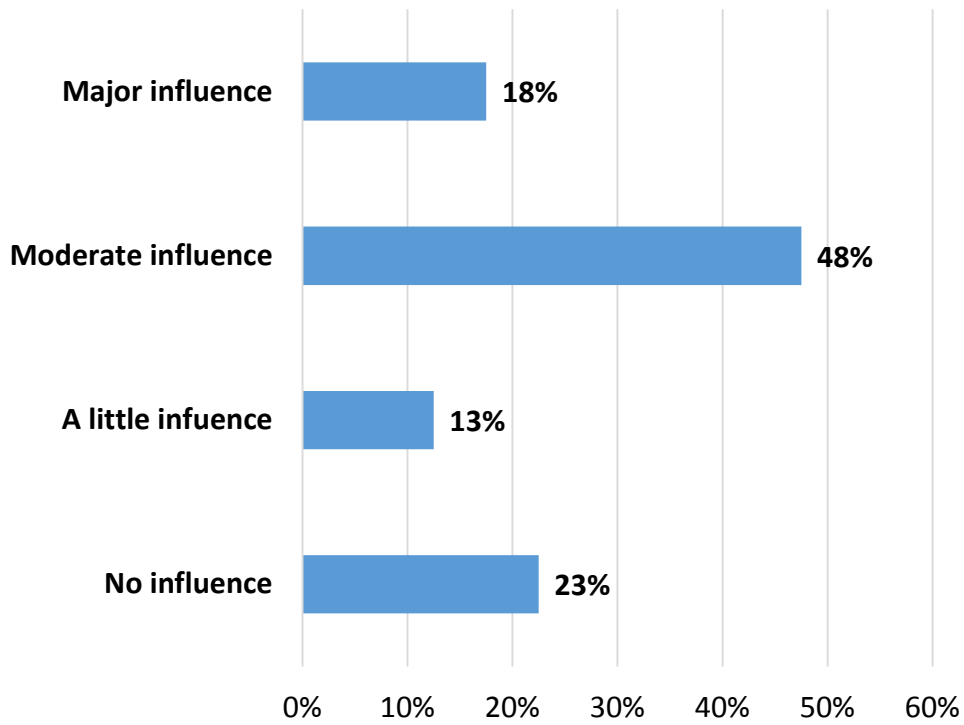
(n = 39)



<b>Mean</b>	<b>2.00</b>
<b>Standard deviation</b>	<b>0.89</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

### Figure 45a

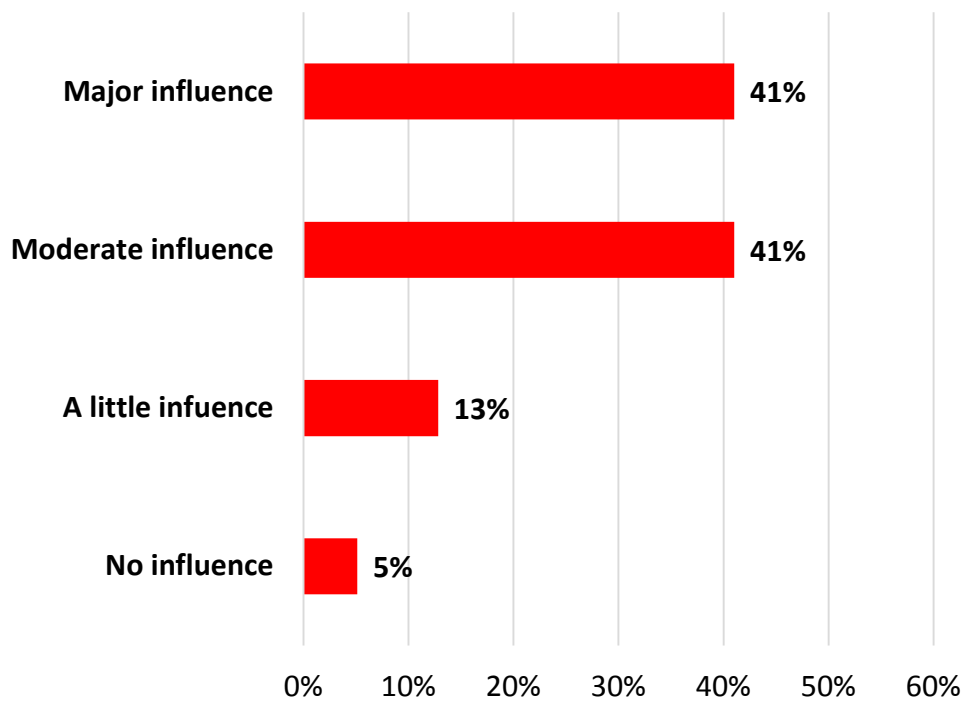
*Perceived level of influence should have:*  
**U.S. Congress**  
(n = 40)



<b>Mean</b>	<b>1.60</b>
<b>Standard deviation</b>	<b>1.03</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 45b**

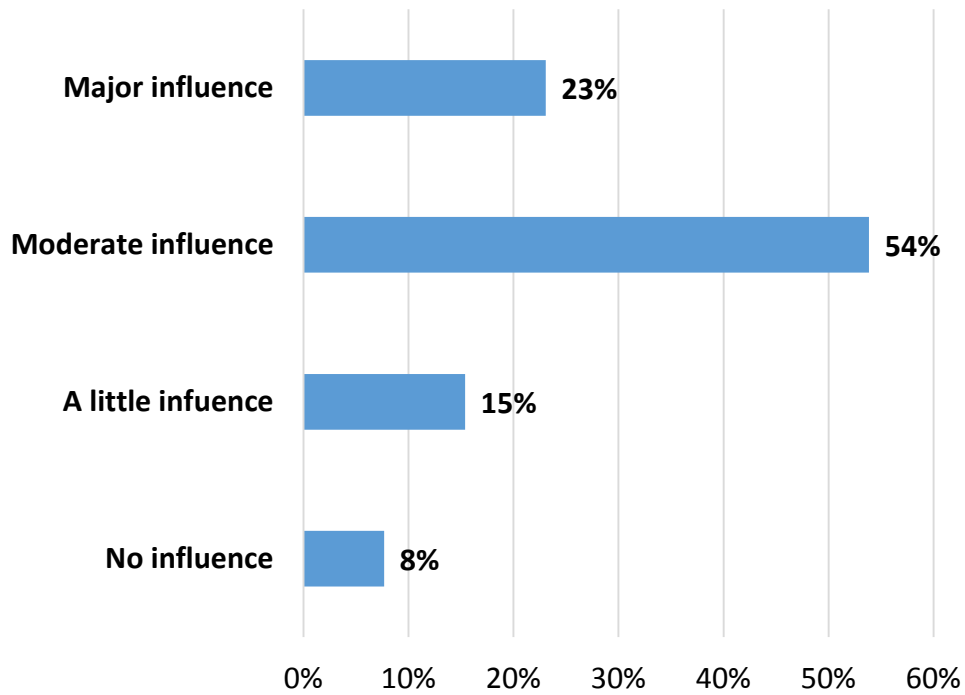
*Perceived level of influence actually have:*  
**U.S. Congress**  
(n = 39)



<b>Mean</b>	<b>2.18</b>
<b>Standard deviation</b>	<b>0.85</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 46a**

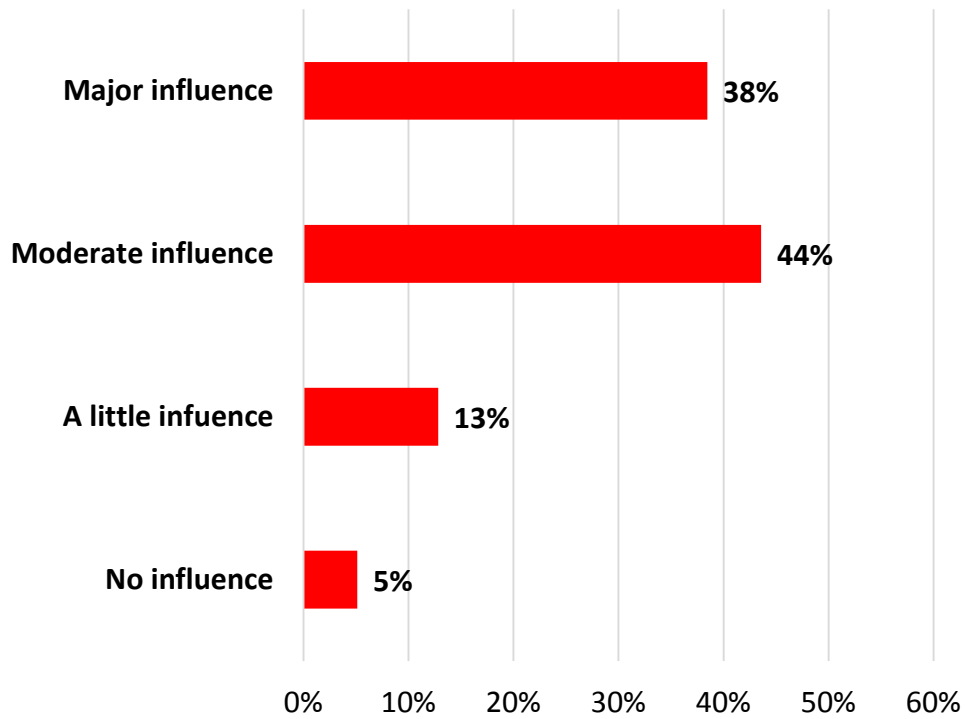
*Perceived level of influence should have:*  
**Texas State Legislature**  
(n = 39)



<b>Mean</b>	<b>1.92</b>
<b>Standard deviation</b>	<b>0.84</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

**Figure 46b**

*Perceived level of influence actually have:*  
**Texas State Legislature**  
(n = 39)



<b>Mean</b>	<b>2.15</b>
<b>Standard deviation</b>	<b>0.84</b>
coding: 0 = No influence; 1 = A little influence; 2 = Moderate influence; 3 = Major influence	

## **Section VIII**

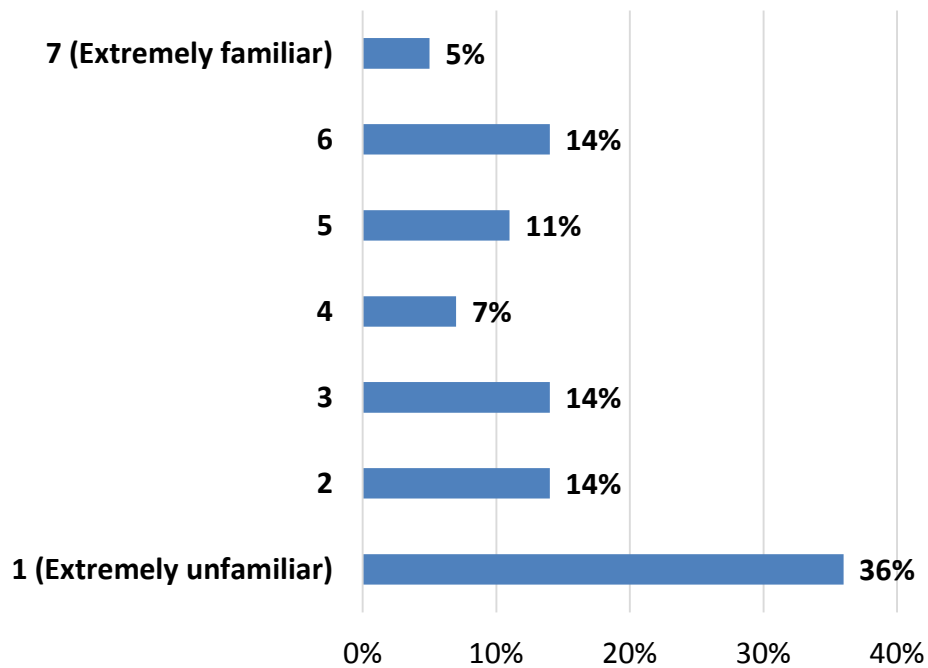
# Hydraulic Fracturing

Figures 47 through 49o pertain to the issue of hydraulic fracturing. Figure 47 summarizes respondents' level of familiarity with the process of hydraulic fracturing. Figures 48a through 48o illustrate the contribution to respondents' knowledge about hydraulic fracturing from 15 different sources. And, Figures 49a through 49o represent respondents' overall trust in each of 15 sources to deliver unbiased, factual knowledge on hydraulic fracturing.

## Figure 47

### Level of familiarity with the process of hydraulic fracturing

(n = 39)



<b>Mean</b>	<b>4.13</b>
<b>Standard deviation</b>	<b>1.98</b>

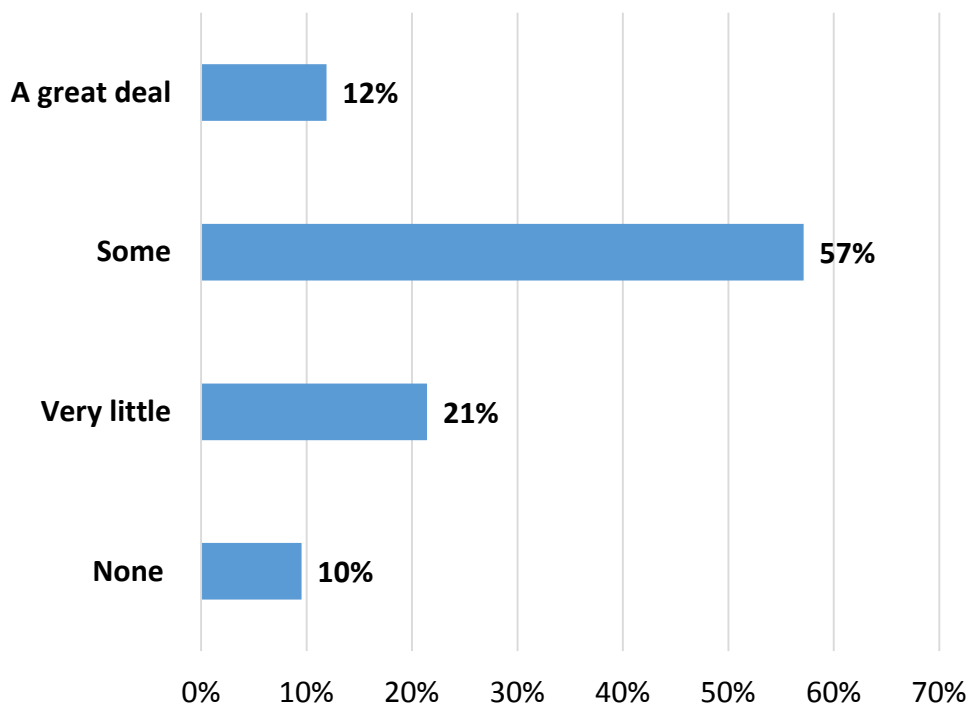


## Figure 48a

*Contributed to knowledge about the process of hydraulic fracturing:*

### Newspapers

(n = 42)

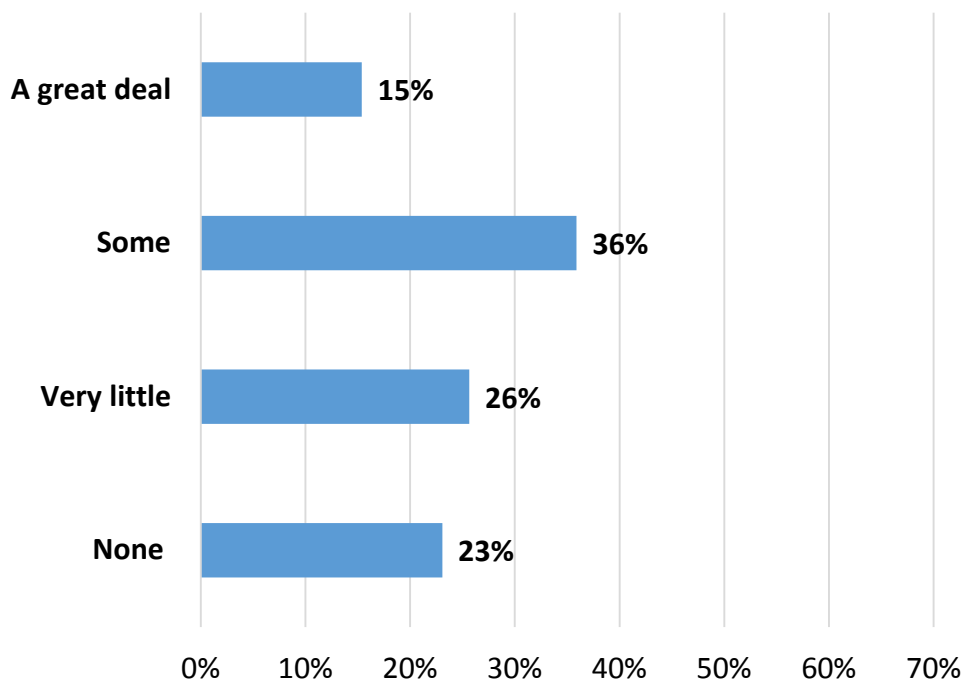


<b>Mean</b>	<b>1.71</b>
<b>Standard deviation</b>	<b>0.81</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48b

*Contributed to knowledge about the process of hydraulic fracturing:*  
**Internet websites**

(n = 39)



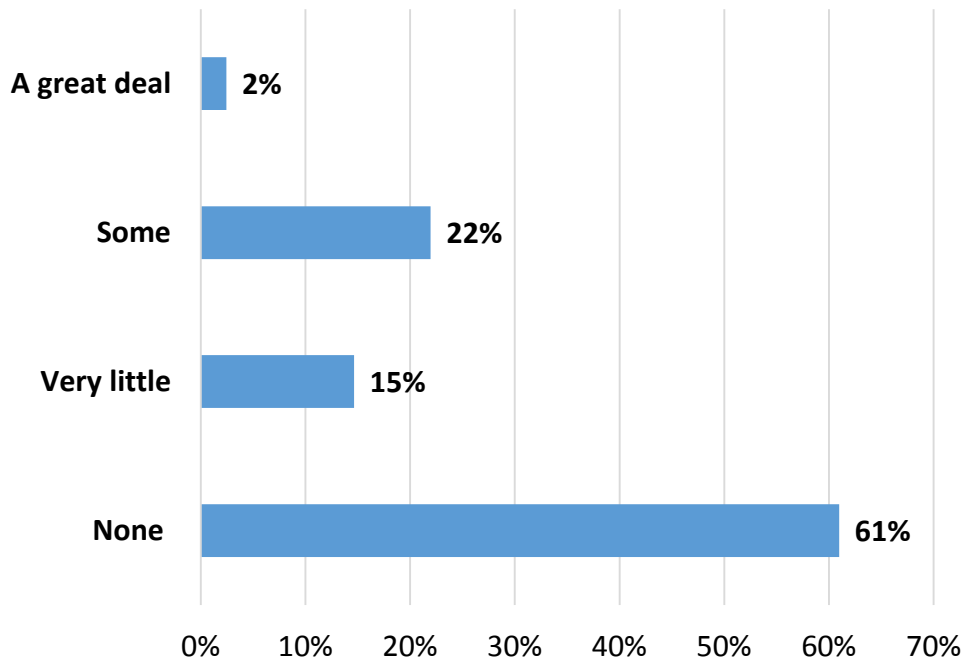
<b>Mean</b>	<b>1.44</b>
<b>Standard deviation</b>	<b>1.02</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48c

*Contributed to knowledge about the process of hydraulic fracturing:*

*Gasland and/or Gasland 2*  
(the films by Josh Fox)

(n = 41)



**Mean**

**0.66**

**Standard deviation**

**0.91**

coding:

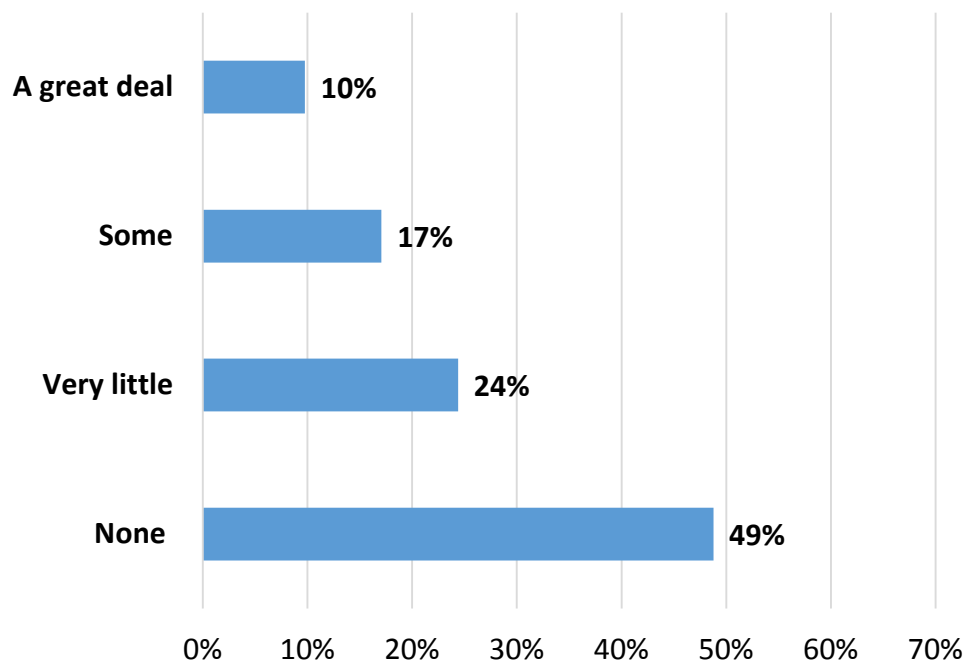
0 = None; 1 = Very little; 2 = Some; 3 = A great deal

## Figure 48d

*Contributed to knowledge about the process of hydraulic fracturing:*

**Texas A&M AgriLife Extension**

(n = 41)



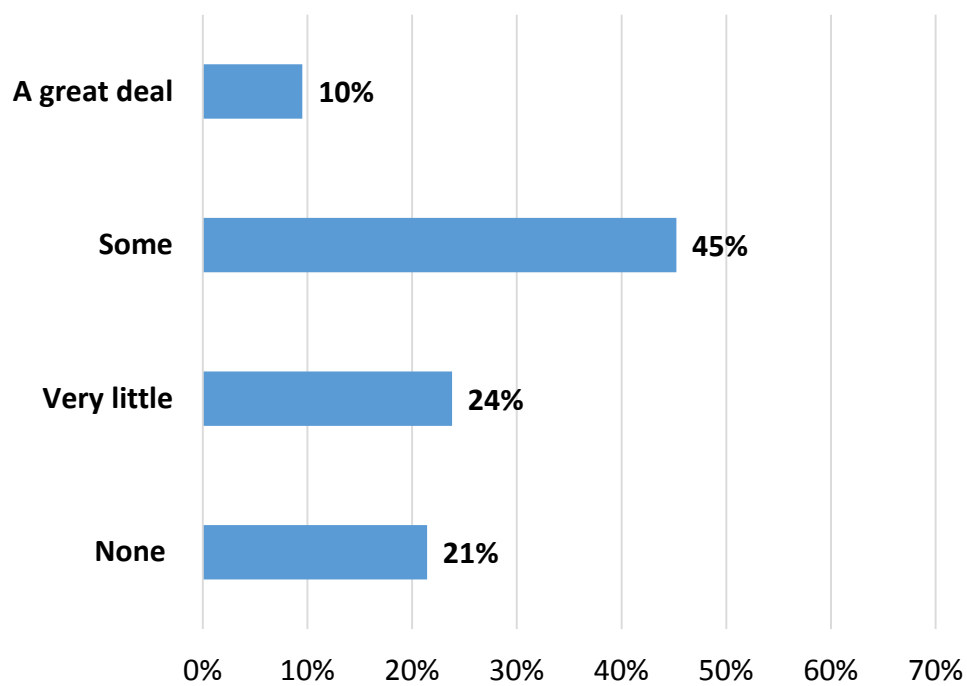
<b>Mean</b>	<b>0.88</b>
<b>Standard deviation</b>	<b>1.03</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48e

*Contributed to knowledge about the process of hydraulic fracturing:*

**Oil/natural gas industry**

(n = 42)



**Mean** 1.43

**Standard deviation** 0.94

coding:

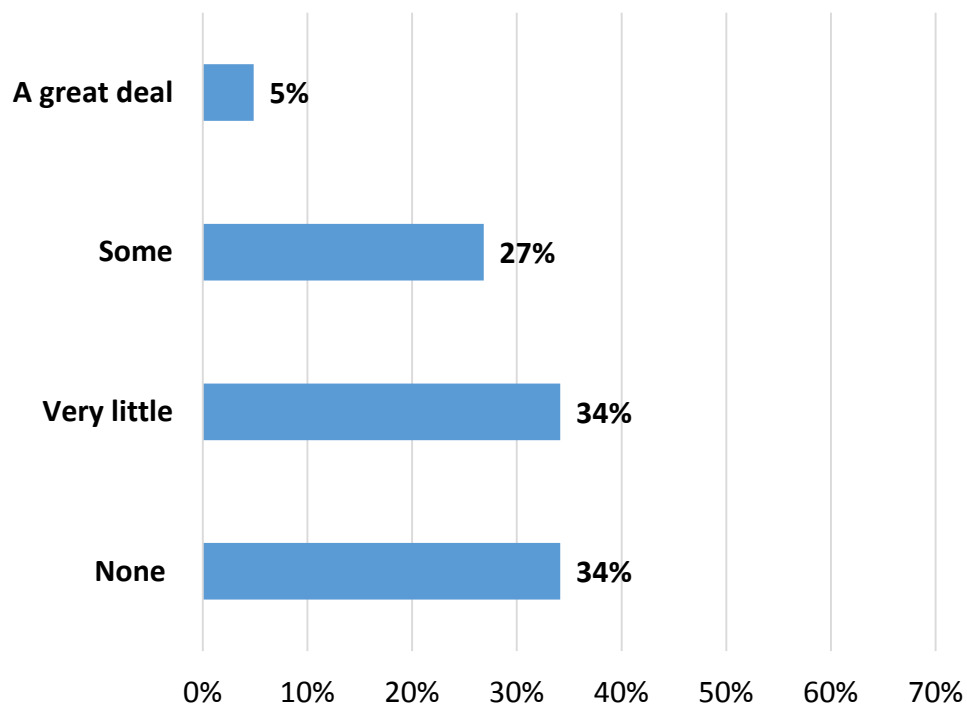
0 = None; 1 = Very little; 2 = Some; 3 = A great deal

## Figure 48f

*Contributed to knowledge about the process of hydraulic fracturing:*

**Regulatory agencies**

(n = 41)



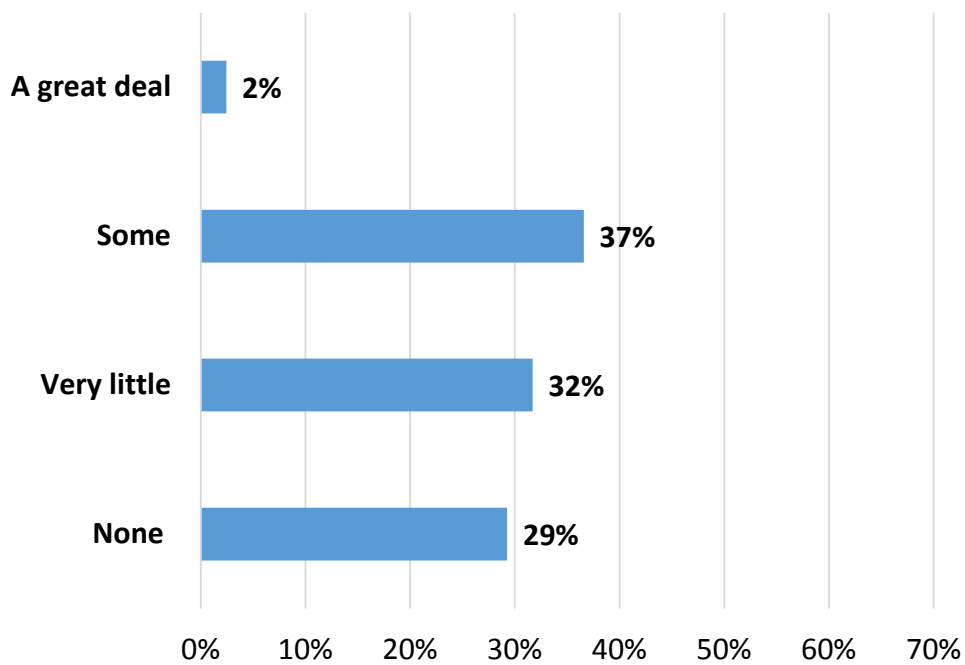
<b>Mean</b>	<b>1.02</b>
<b>Standard deviation</b>	<b>0.91</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48g

*Contributed to knowledge about the process of hydraulic fracturing:*

**Conservation/environmental groups**

(n = 41)



**Mean**

**1.12**

**Standard deviation**

**0.87**

coding:

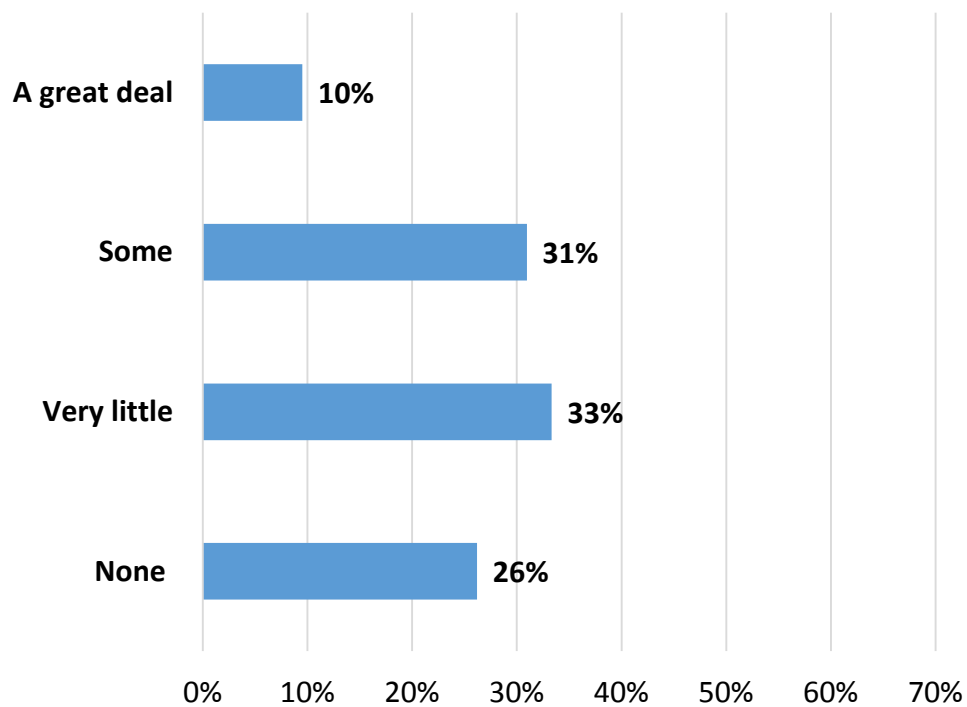
0 = None; 1 = Very little; 2 = Some; 3 = A great deal

## Figure 48h

*Contributed to knowledge about the process of hydraulic fracturing:*

### Social media

(n = 42)



<b>Mean</b>	<b>1.24</b>
<b>Standard deviation</b>	<b>0.96</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

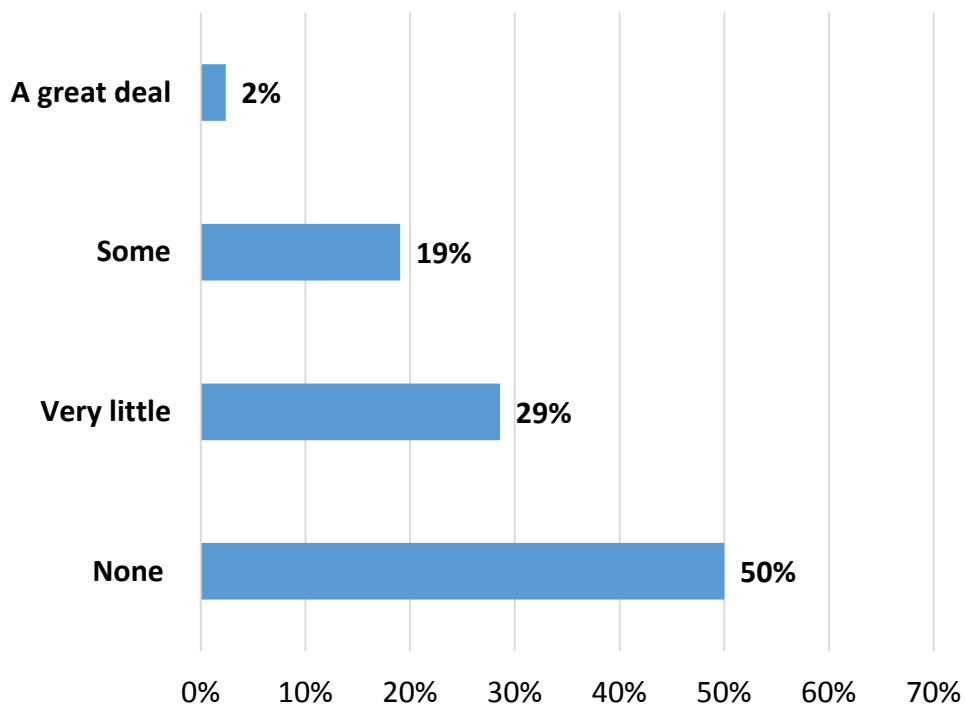


## Figure 48i

*Contributed to knowledge about the process of hydraulic fracturing:*

**University professors**

(n = 42)



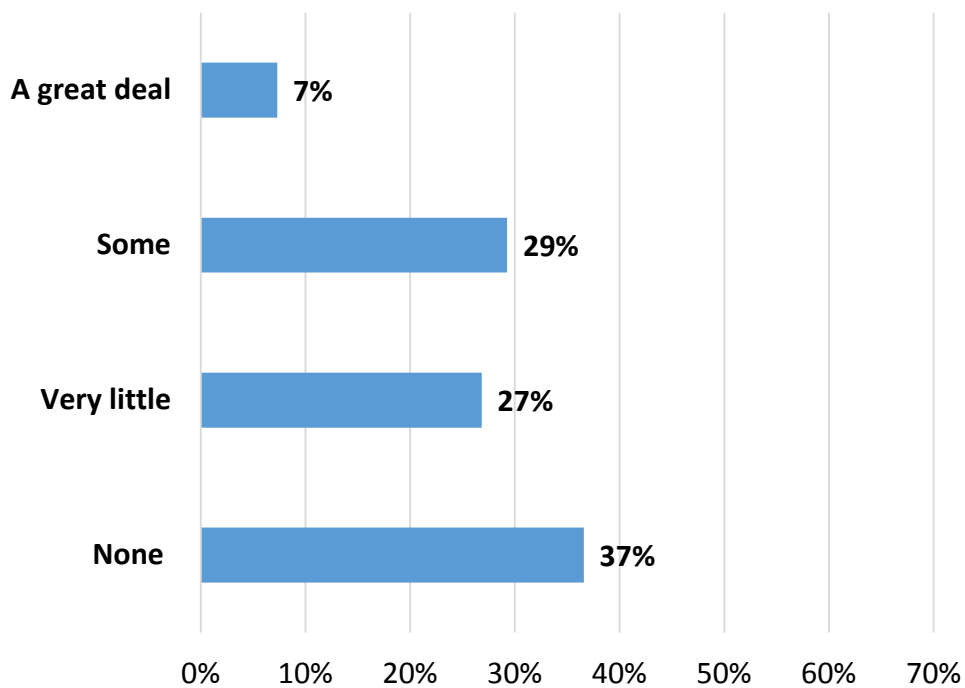
<b>Mean</b>	<b>0.74</b>
<b>Standard deviation</b>	<b>0.86</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48j

*Contributed to knowledge about the process of hydraulic fracturing:*

**Landowner groups/coalitions**

(n = 41)



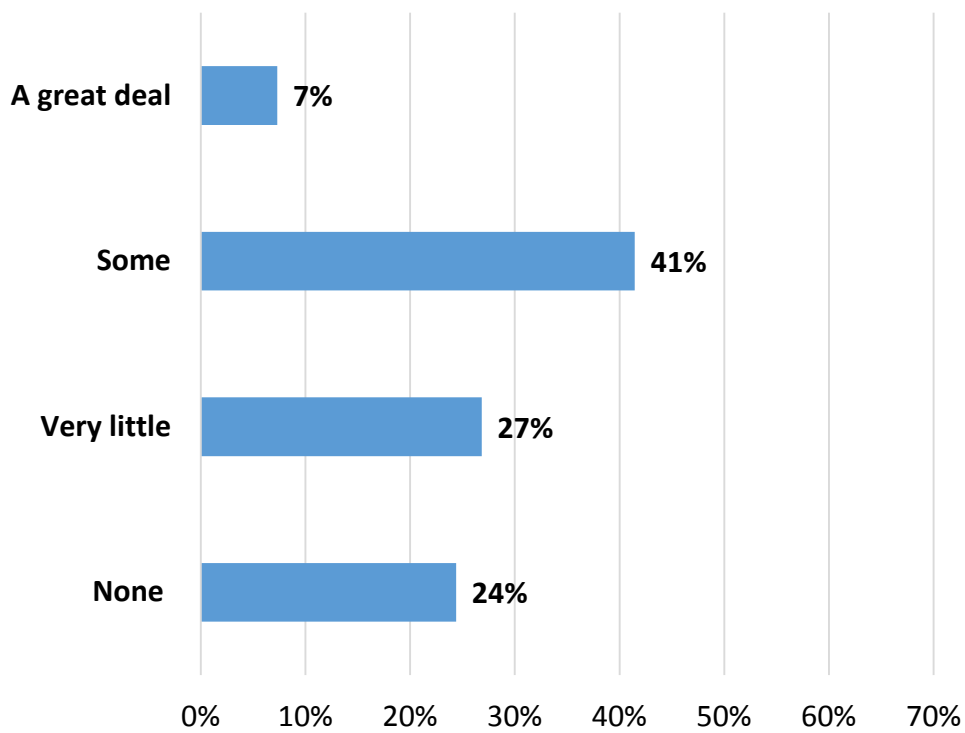
<b>Mean</b>	<b>1.07</b>
<b>Standard deviation</b>	<b>0.99</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48k

*Contributed to knowledge about the process of hydraulic fracturing:*

### Neighbors

(n = 41)



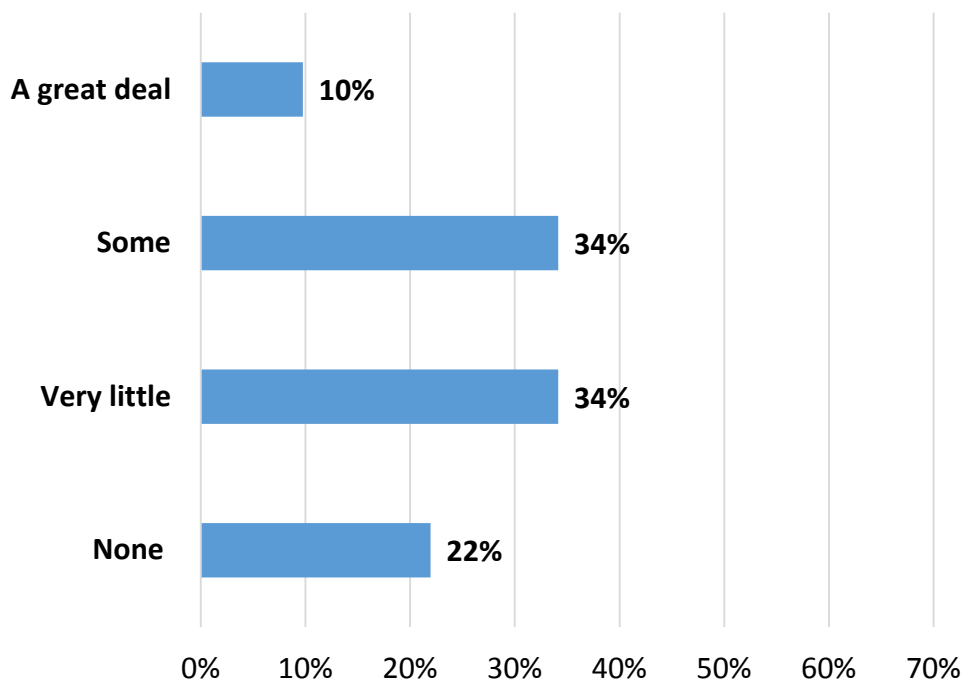
<b>Mean</b>	<b>1.32</b>
<b>Standard deviation</b>	<b>0.93</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48I

*Contributed to knowledge about the process of hydraulic fracturing:*

**Friends in community**

(n = 41)



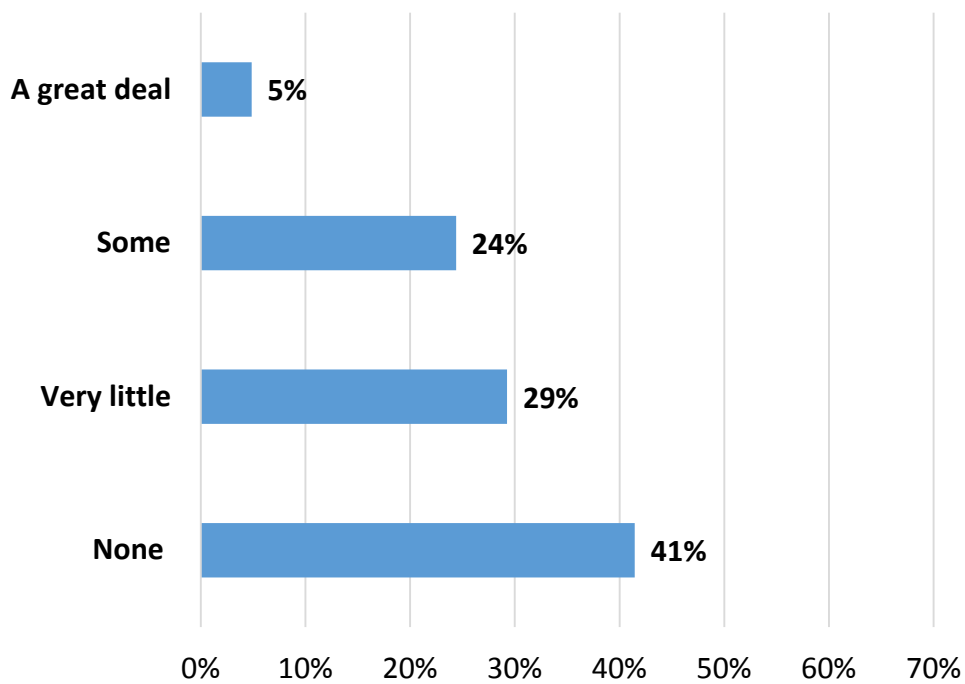
<b>Mean</b>	<b>1.32</b>
<b>Standard deviation</b>	<b>0.93</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48m

*Contributed to knowledge about the process of hydraulic fracturing:*

**Elected county officials**

(n = 41)



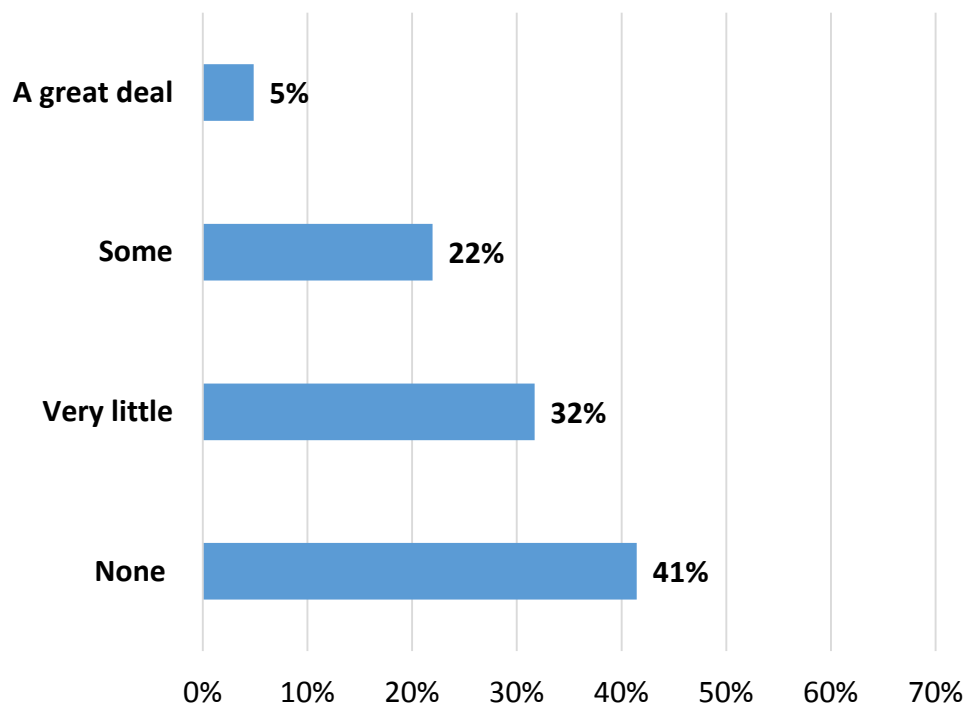
<b>Mean</b>	<b>0.93</b>
<b>Standard deviation</b>	<b>0.93</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48n

*Contributed to knowledge about the process of hydraulic fracturing:*

### Elected city officials

(n = 41)



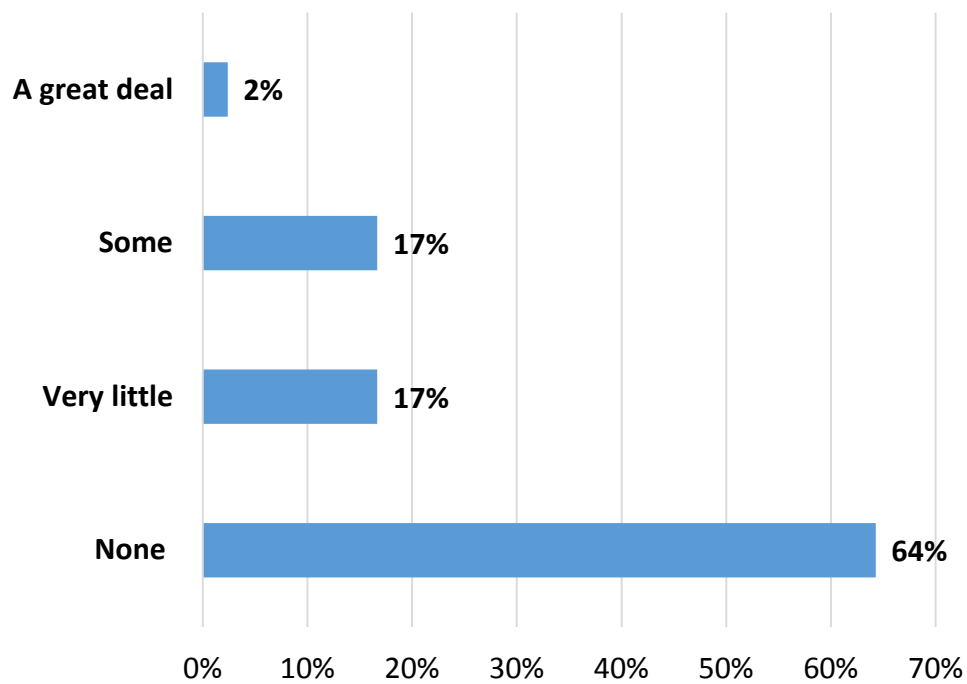
<b>Mean</b>	<b>0.90</b>
<b>Standard deviation</b>	<b>0.92</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 48o

*Contributed to knowledge about the process of hydraulic fracturing:*

### Religious leaders

(n = 42)



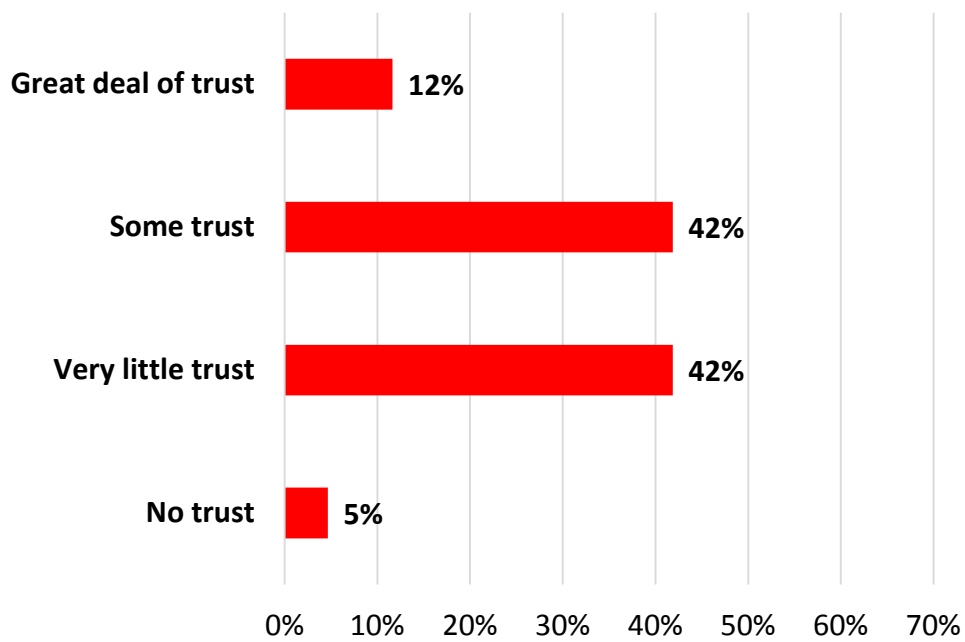
<b>Mean</b>	<b>0.57</b>
<b>Standard deviation</b>	<b>0.86</b>
coding: 0 = None; 1 = Very little; 2 = Some; 3 = A great deal	

## Figure 49a

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Newspapers

(n = 43)



**Mean** 1.60

**Standard deviation** 0.76

coding:

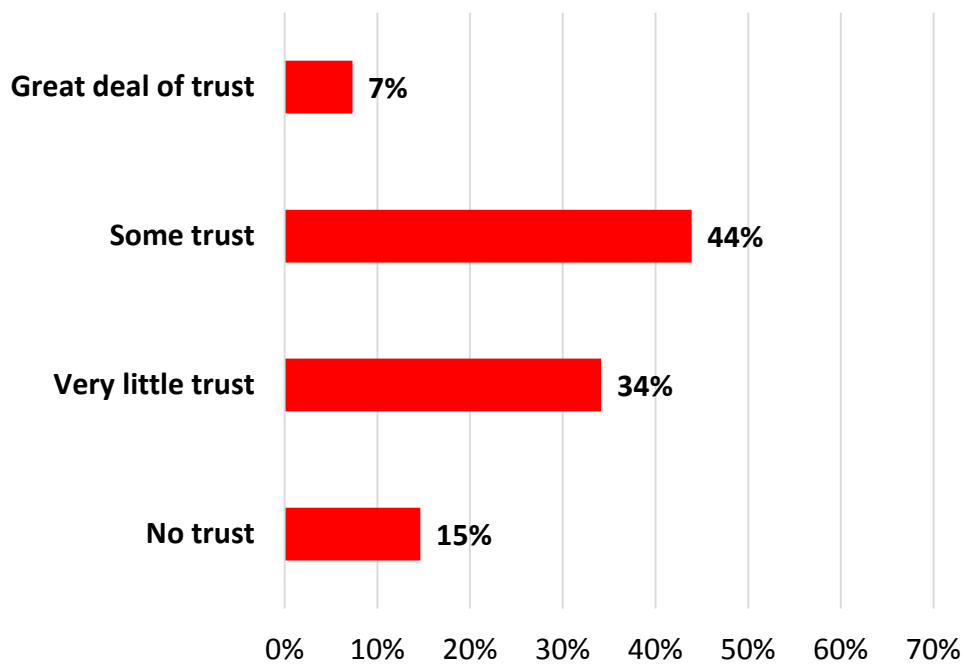
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust



## Figure 49b

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*  
**Internet websites**

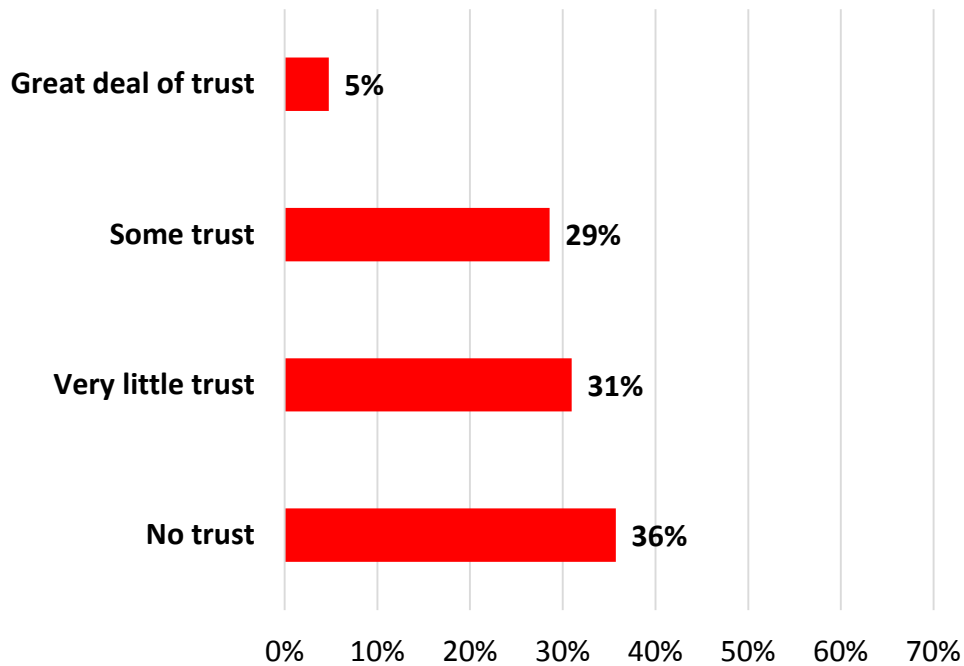
(n = 41)



<b>Mean</b>	<b>1.44</b>
<b>Standard deviation</b>	<b>0.84</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

## Figure 49c

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:  
Gasland and/or Gasland 2  
(the films by Josh Fox)*  
(n = 42)



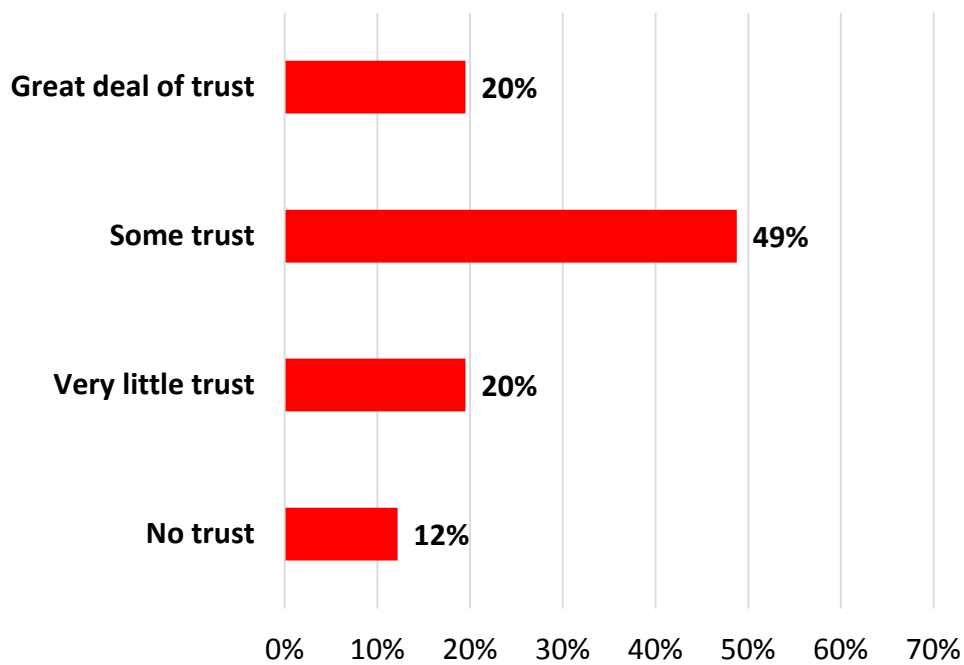
<b>Mean</b>	<b>1.02</b>
<b>Standard deviation</b>	<b>0.92</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

**Figure 49d**

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**Texas A&M AgriLife Extension**

(n = 41)



**Mean**

**1.76**

**Standard deviation**

**0.92**

coding:

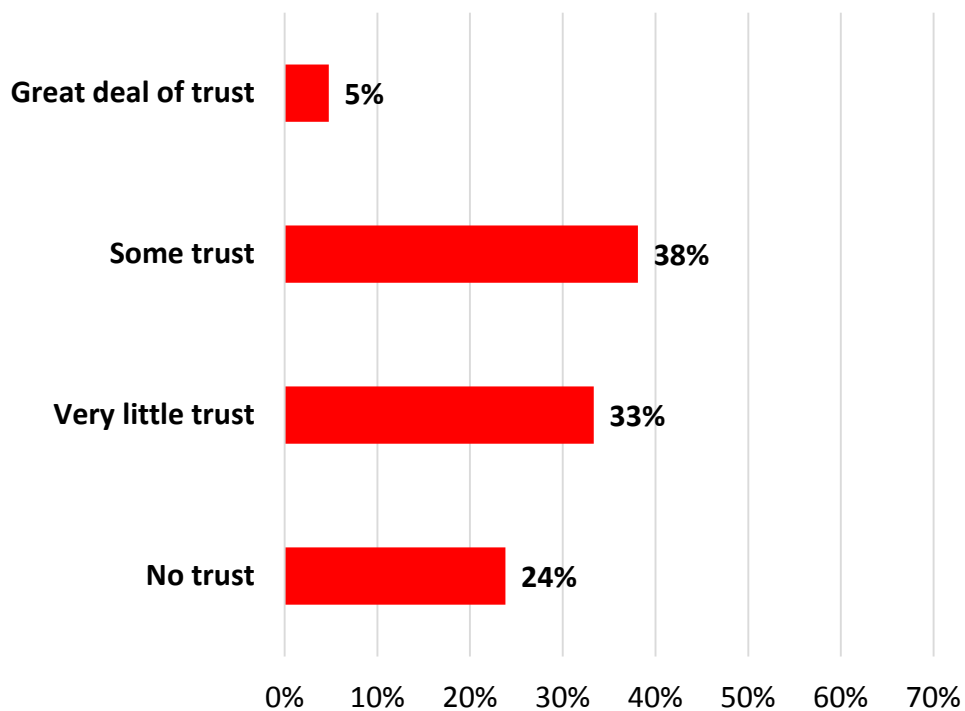
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## Figure 49e

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**Oil/natural gas industry**

(n = 42)



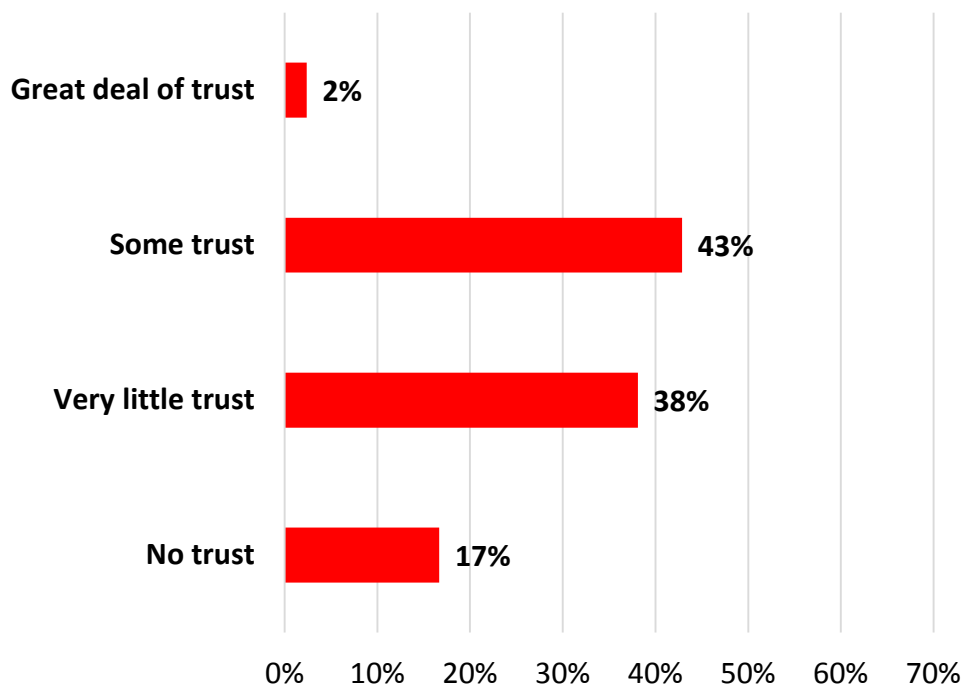
<b>Mean</b>	<b>1.24</b>
<b>Standard deviation</b>	<b>0.88</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

## Figure 49f

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Regulatory agencies

(n = 42)



**Mean**

**1.31**

**Standard deviation**

**0.78**

coding:

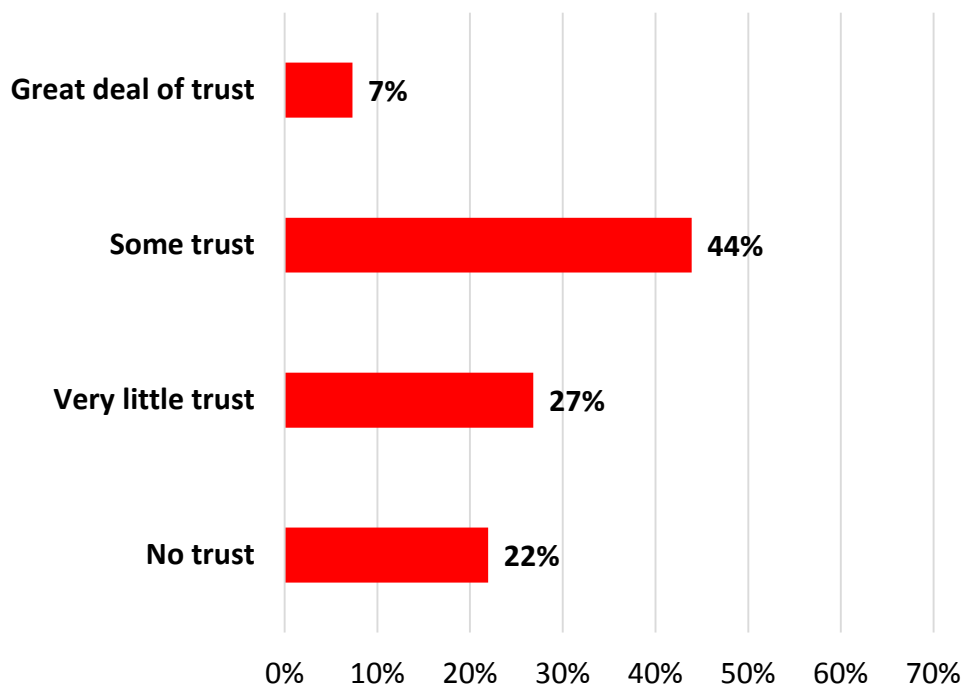
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

**Figure 49g**

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**Conservation/environmental groups**

(n = 41)



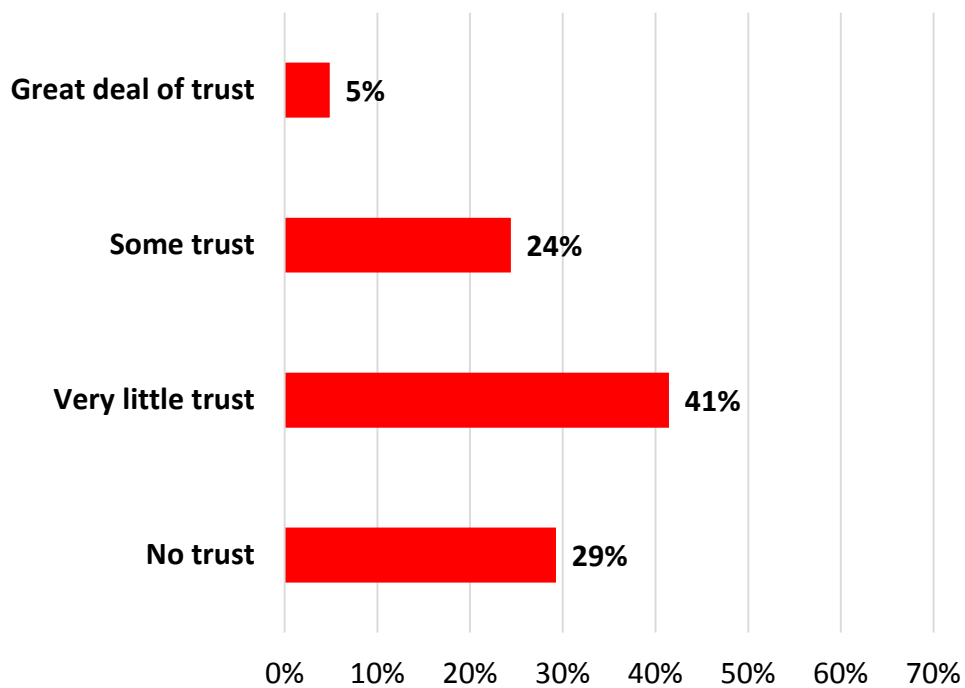
<b>Mean</b>	<b>1.37</b>
<b>Standard deviation</b>	<b>0.92</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

## Figure 49h

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Social media

(n = 41)



**Mean**

**1.05**

**Standard deviation**

**0.87**

coding:

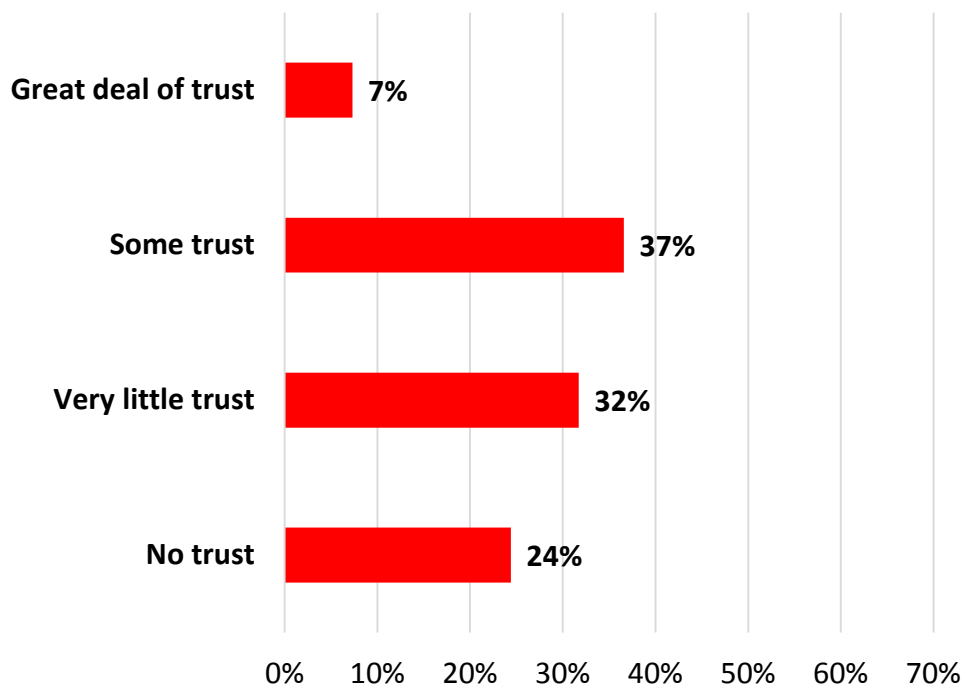
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## Figure 49i

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**University professors**

(n = 41)



**Mean**

**1.27**

**Standard deviation**

**0.92**

coding:

0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

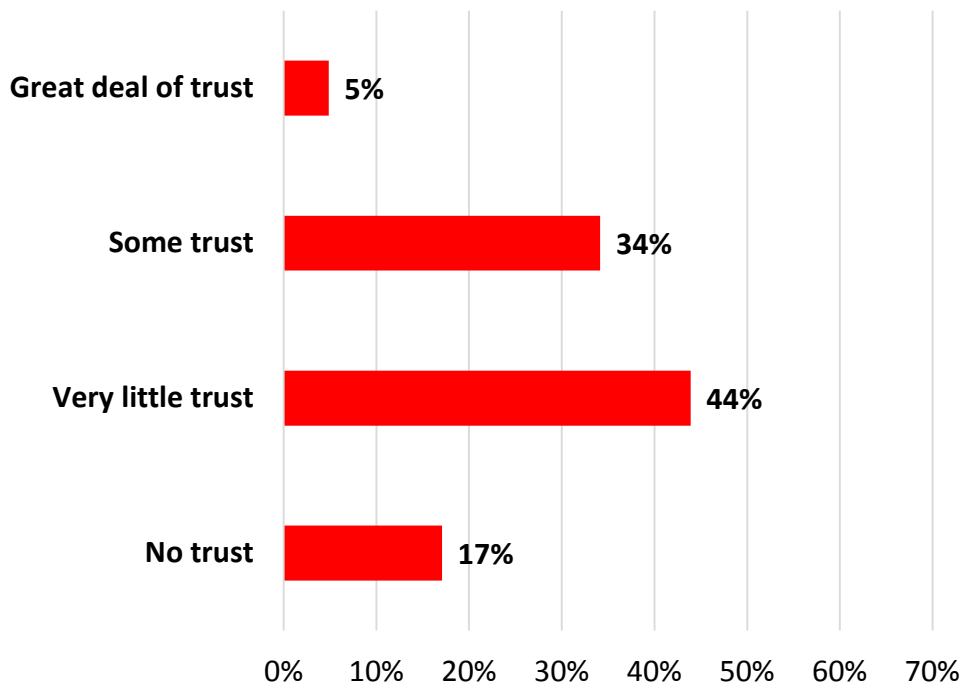


## Figure 49j

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**Landowner groups/coalitions**

(n = 41)



**Mean**

**1.27**

**Standard deviation**

**0.81**

coding:

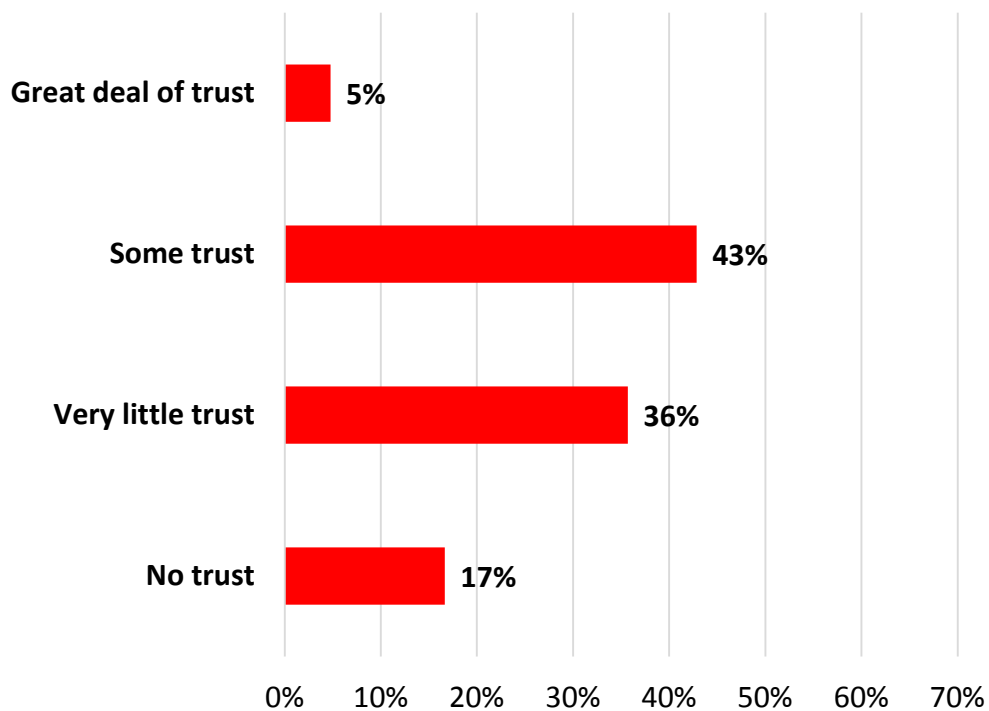
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## Figure 49k

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Neighbors

(n = 42)



**Mean**

**1.36**

**Standard deviation**

**0.82**

coding:

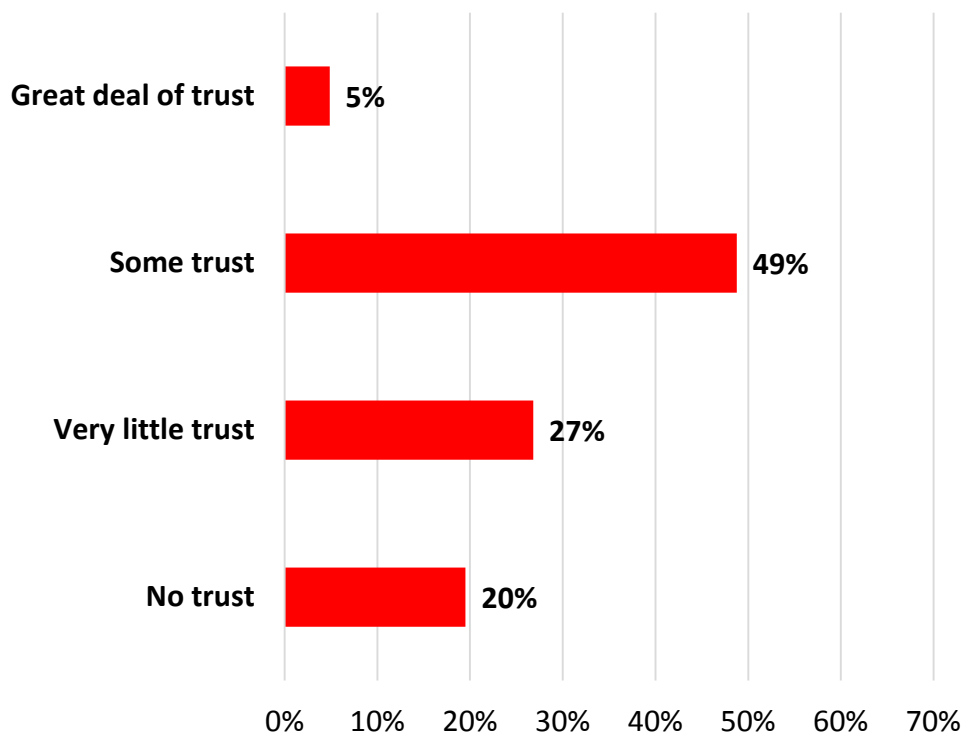
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## Figure 49I

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

**Friends in community**

(n = 41)



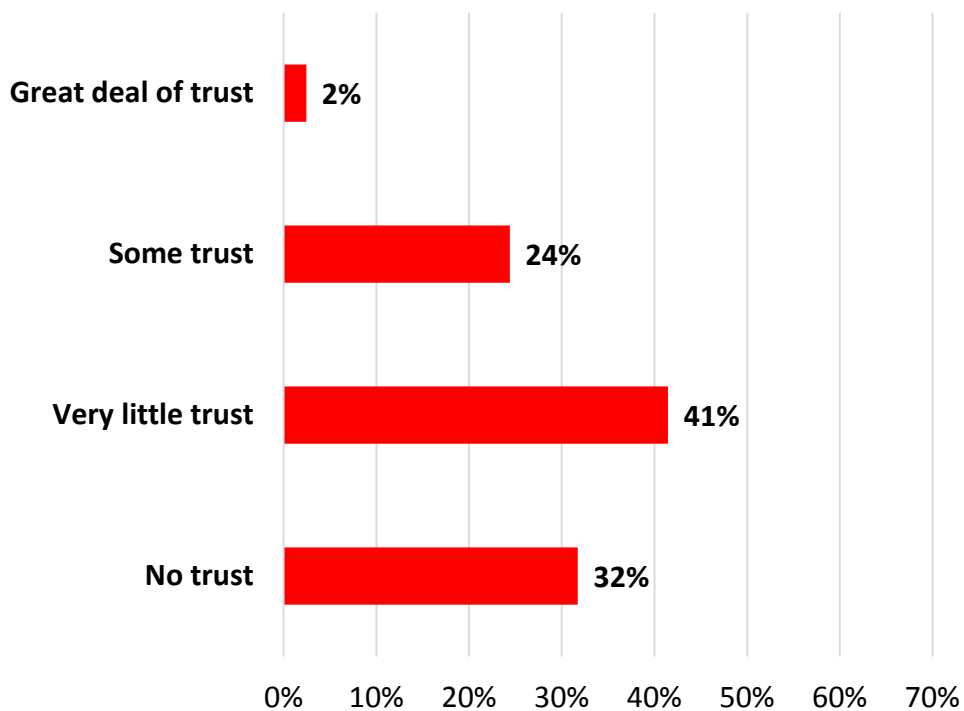
<b>Mean</b>	<b>1.39</b>
<b>Standard deviation</b>	<b>0.86</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

## Figure 49m

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Elected county officials

(n = 41)



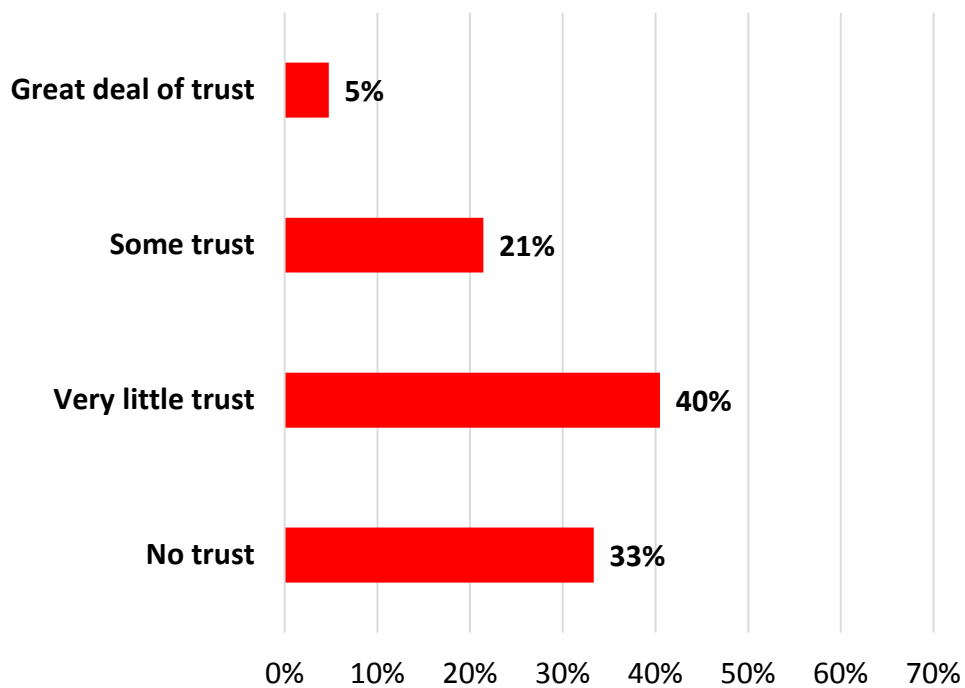
<b>Mean</b>	<b>0.98</b>
<b>Standard deviation</b>	<b>0.82</b>
coding: 0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust	

## Figure 49n

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Elected city officials

(n = 42)



**Mean**

**0.98**

**Standard deviation**

**0.87**

coding:

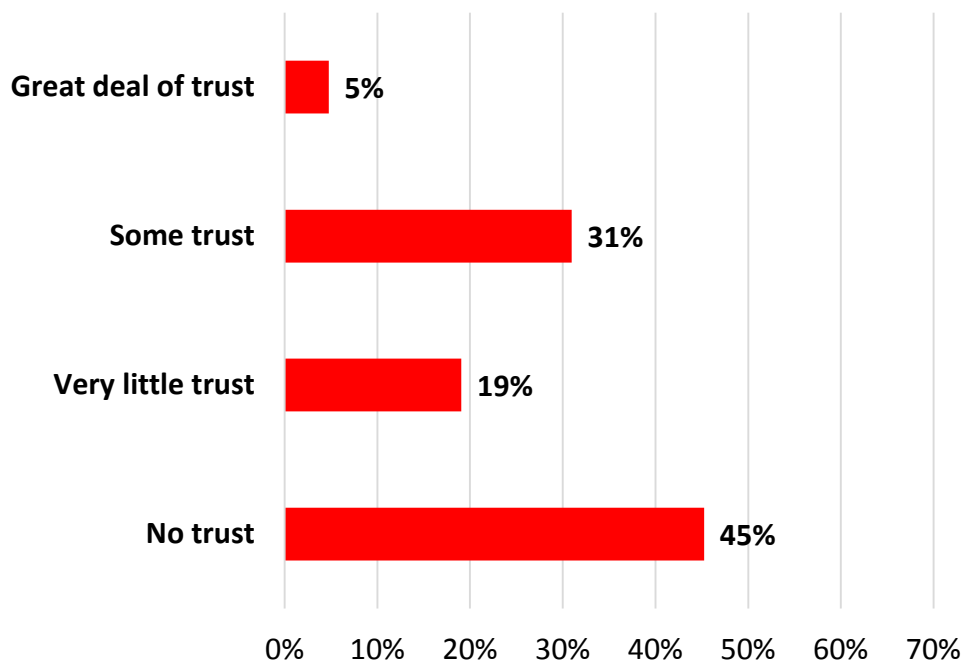
0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## Figure 49o

*Trust to deliver unbiased, factual knowledge on hydraulic fracturing:*

### Religious leaders

(n = 42)



**Mean**

**0.95**

**Standard deviation**

**0.99**

coding:

0 = No trust; 1 = Very little trust; 2 = Some trust; 3 = Great deal of trust

## **Section IX**

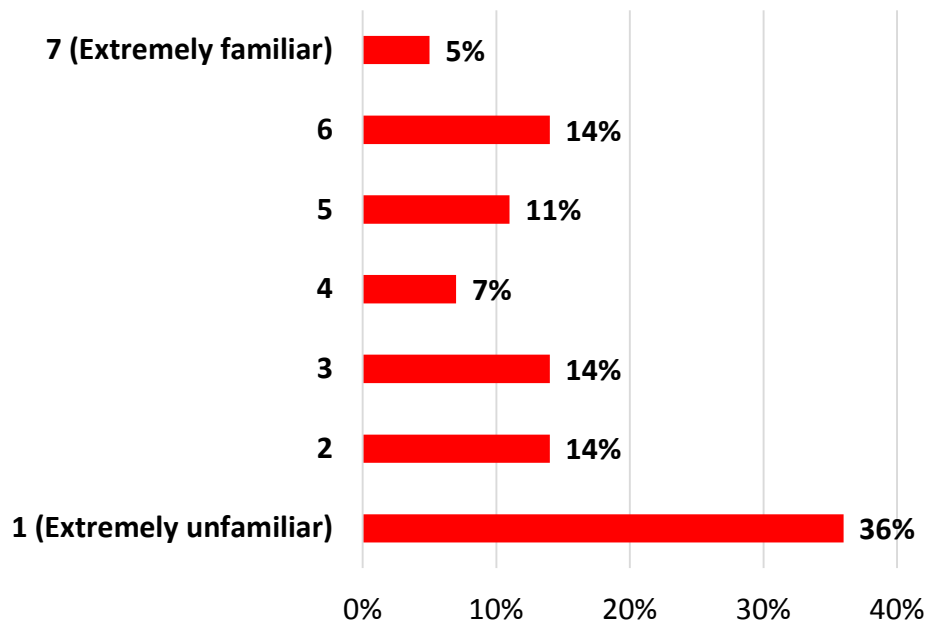
# **Frac Flowback Water**

Figures 50 and 51 and Table 2 involve issues associated with “frac flowback water” (i.e., the water that returns to the surface after a gas well is hydraulically fractured). Figure 50 summarize respondents’ level of familiarity with the management and disposal of frac flowback water in the Eagle Ford Shale. Figure 51 demonstrates respondents’ level of familiarity with frac flowback wastewater treatment technology. And, Table 2 summarizes respondents’ views on the possible safe uses of treated frac flowback waters.

## Figure 50

### Level of familiarity with the management and disposal of frac flowback water in the Eagle Ford Shale

(n = 44)



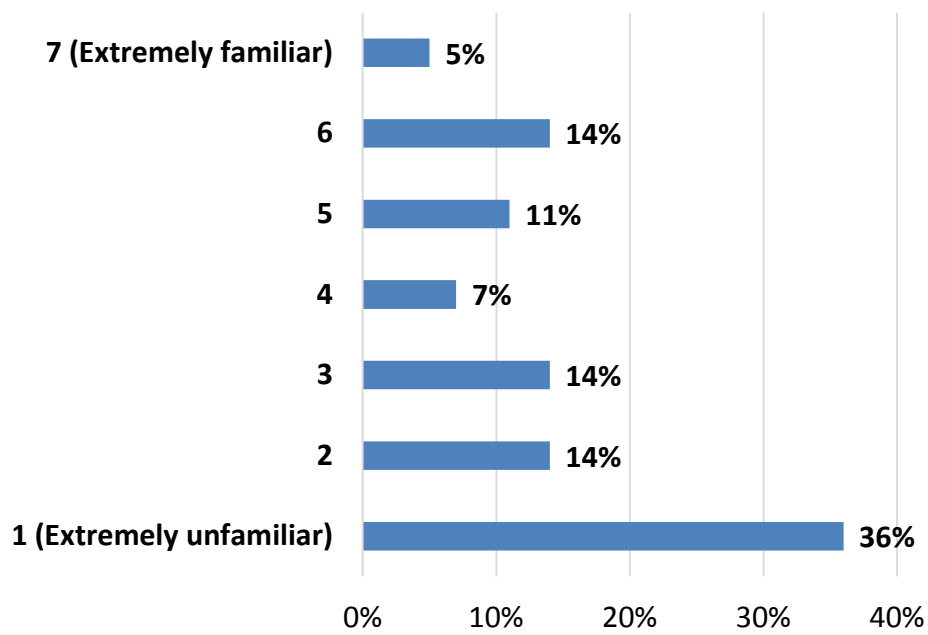
<b>Mean</b>	<b>3.16</b>
<b>Standard deviation</b>	<b>2.07</b>



## Figure 51

### Level of familiarity with frac flowback wastewater treatment technology

(n = 44)



<b>Mean</b>	<b>3.02</b>
<b>Standard deviation</b>	<b>2.04</b>

**Table 2**

**Ranking of ways treated wastewater from hydraulic fracturing operations might be used safely**

<b>Ways desalinated water could be safely used</b>	<b>Yes</b>	<b>No</b>
Re-use by gas and oil industry operators (n = 43)	86%	14%
Industrial use (e.g., manufacturing, etc.) (n = 42)	81%	19%
Municipal uses (e.g., watering of golf courses and city parks, etc.) (n = 43)	47%	53%
Home irrigation purposes (e.g., watering lawns and shrubs, etc.) (n = 43)	44%	56%
Maintenance of stream flows/reservoir levels (n = 43)	30%	70%
Irrigation of farmland and/or rangeland (n = 43)	28%	72%
Watering of livestock (n = 43)	16%	84%
People's drinking water (n = 43)	7%	93%

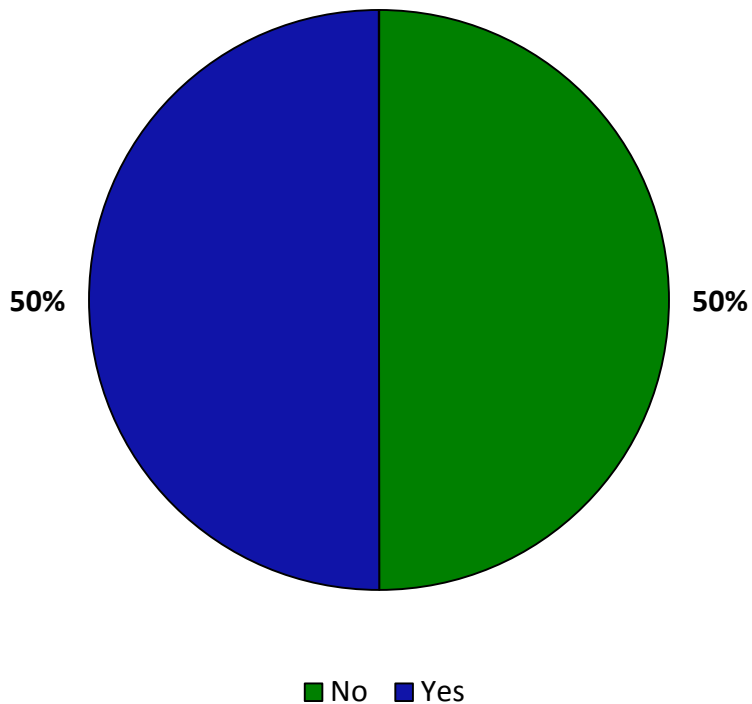
## **Section X**

# Individual-Level Characteristics

Figures 52 through 68 summarize selected individual-level traits of the survey respondents.

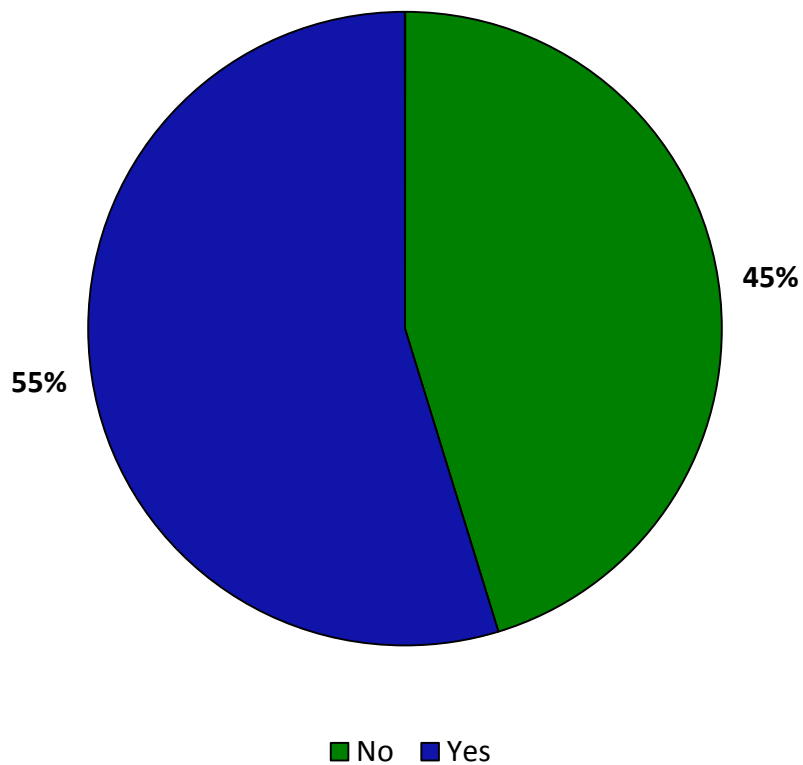
## Figure 52

Land ownership in the  
Eagle Ford Shale play  
(n = 44)



### Figure 53

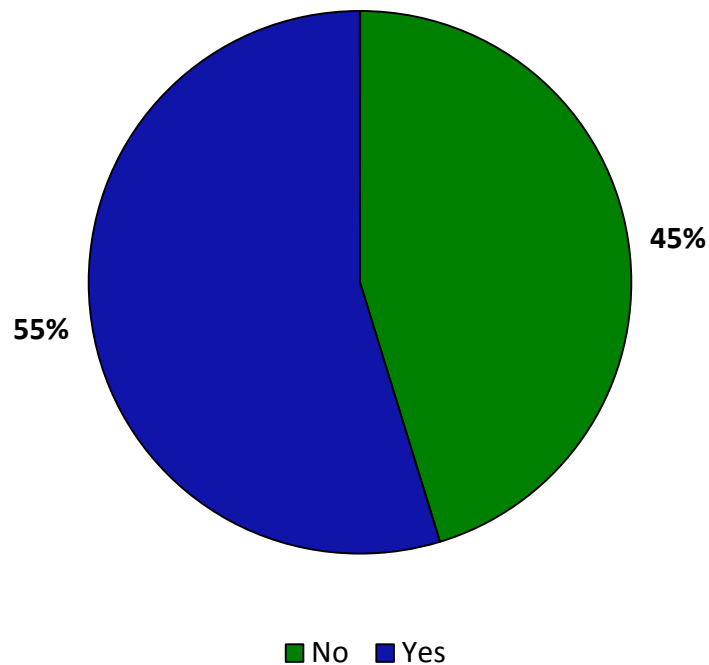
Ownership of mineral rights with land owned  
in the Eagle Ford Shale play  
(n = 42)



## Figure 54

Been approached by landmen seeking to lease any of owned land for oil/gas drilling or for laying pipelines

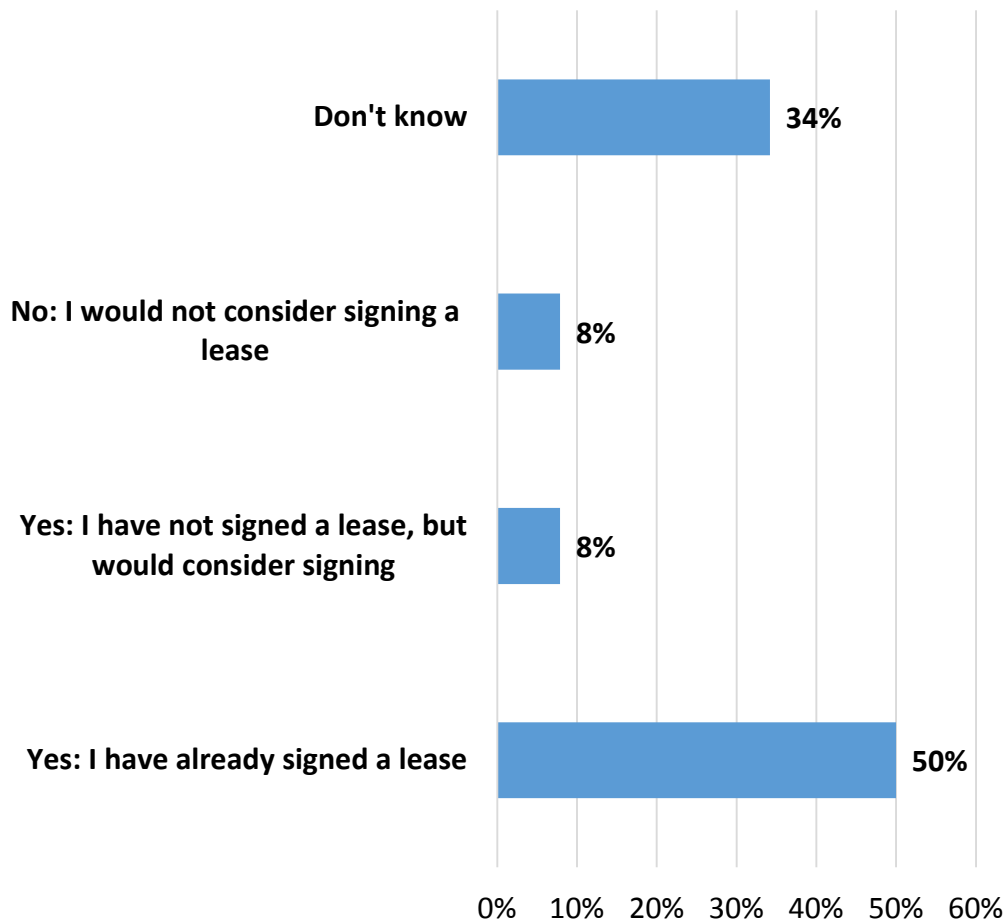
(n = 42)



**Figure 55**

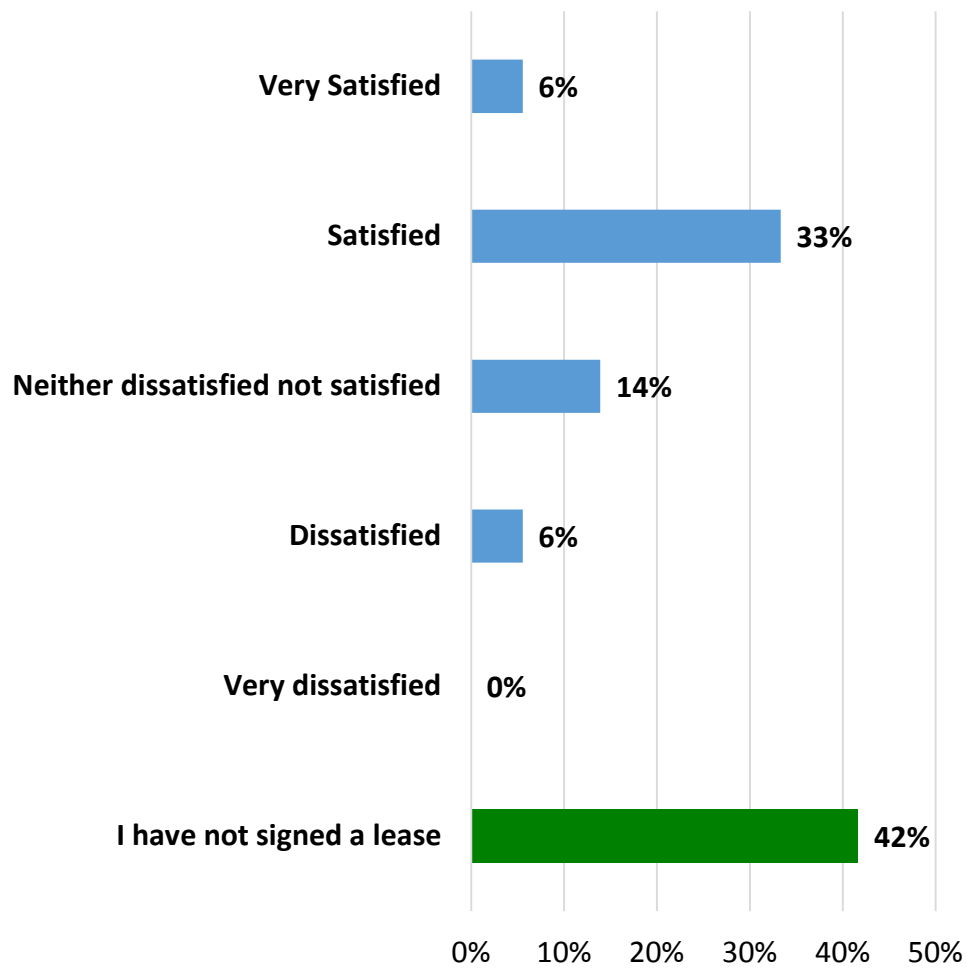
Have signed or will sign an Eagle Ford Shale lease to allow oil/gas drilling or the laying of pipelines on owned land

(n = 38)



**Figure 56**

**Satisfaction with signed lease**  
(n = 36)

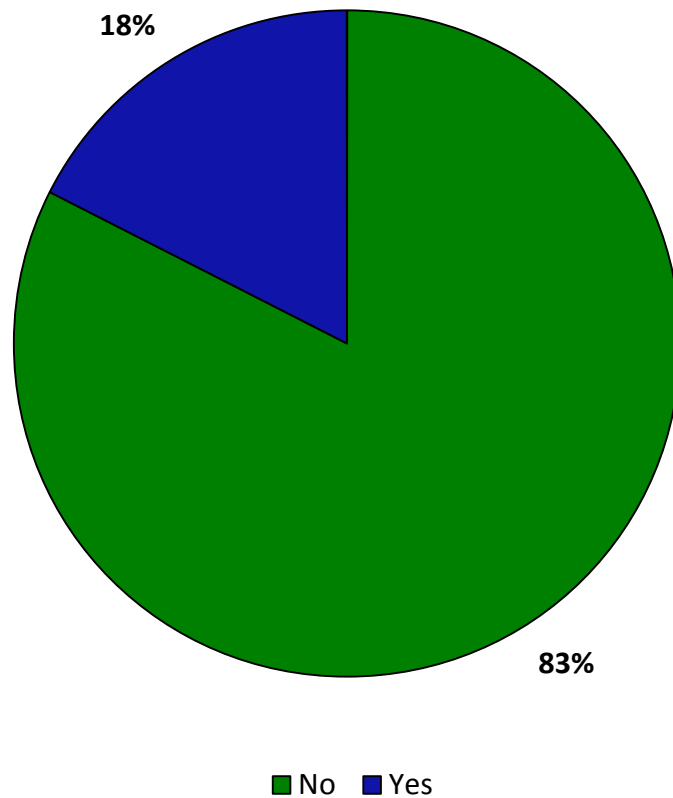




**Figure 57**

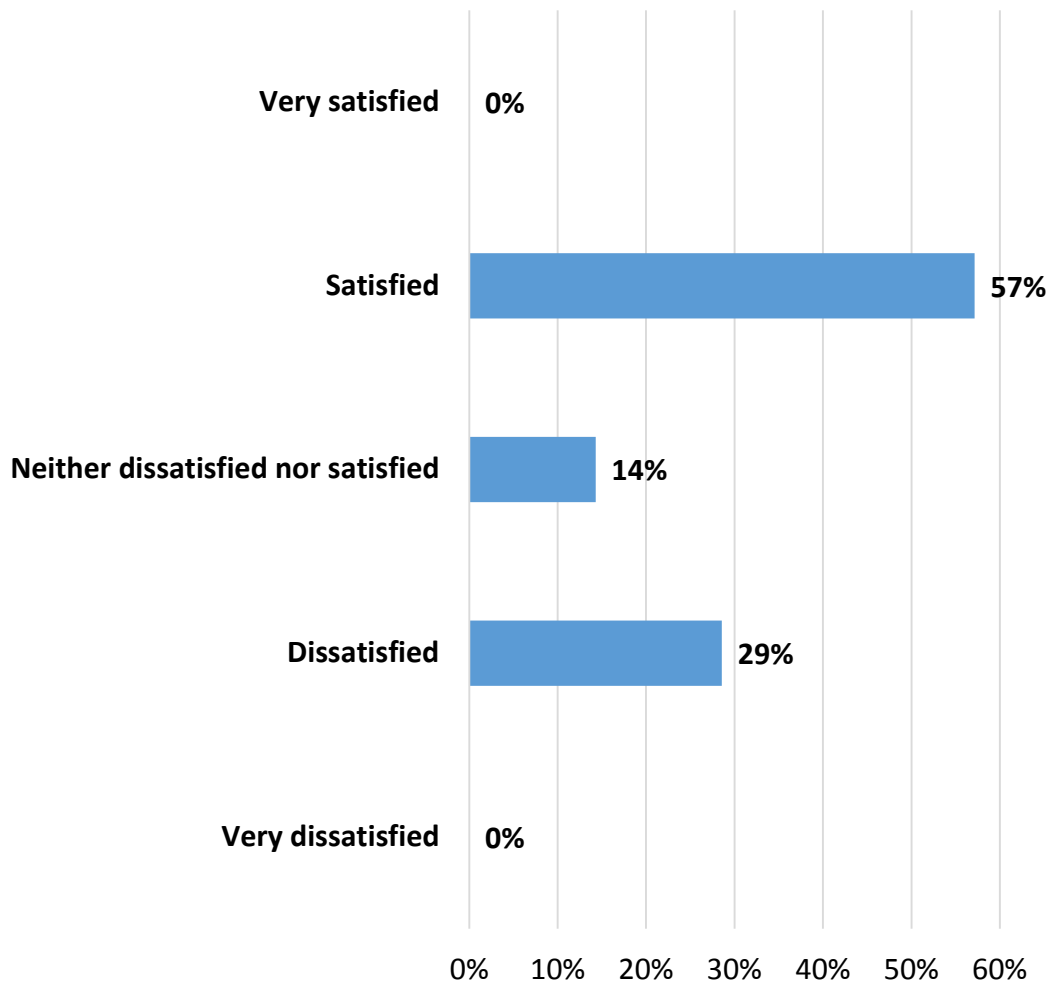
Drilling or pipeline development on owned in Eagle Ford Shale play

(n = 40)



**Figure 58**

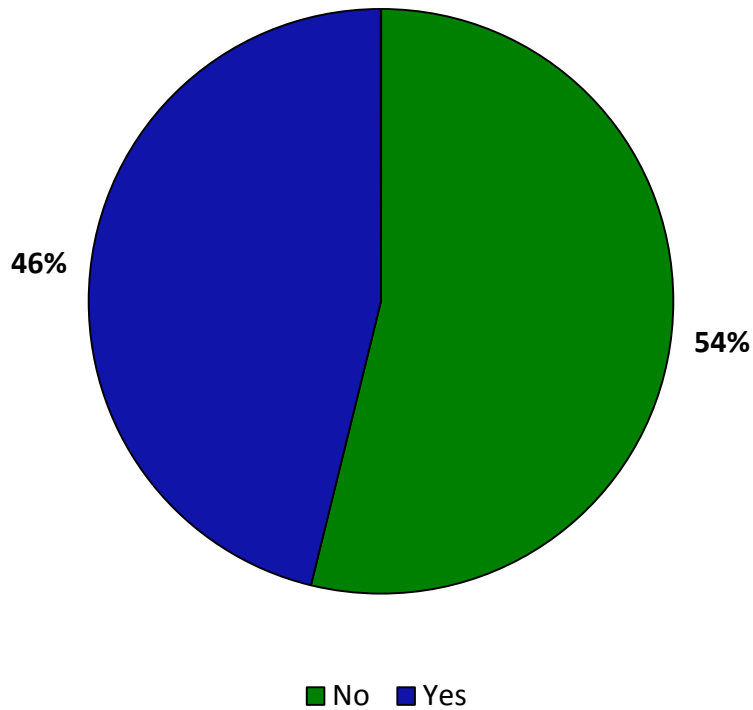
Satisfaction with drilling and/or pipeline development on land (for those who own land in where development has occurred)  
(n = 7)



## Figure 59

Received any royalties or lease payments for drilling or pipeline development on owned land in the Eagle Ford Shale

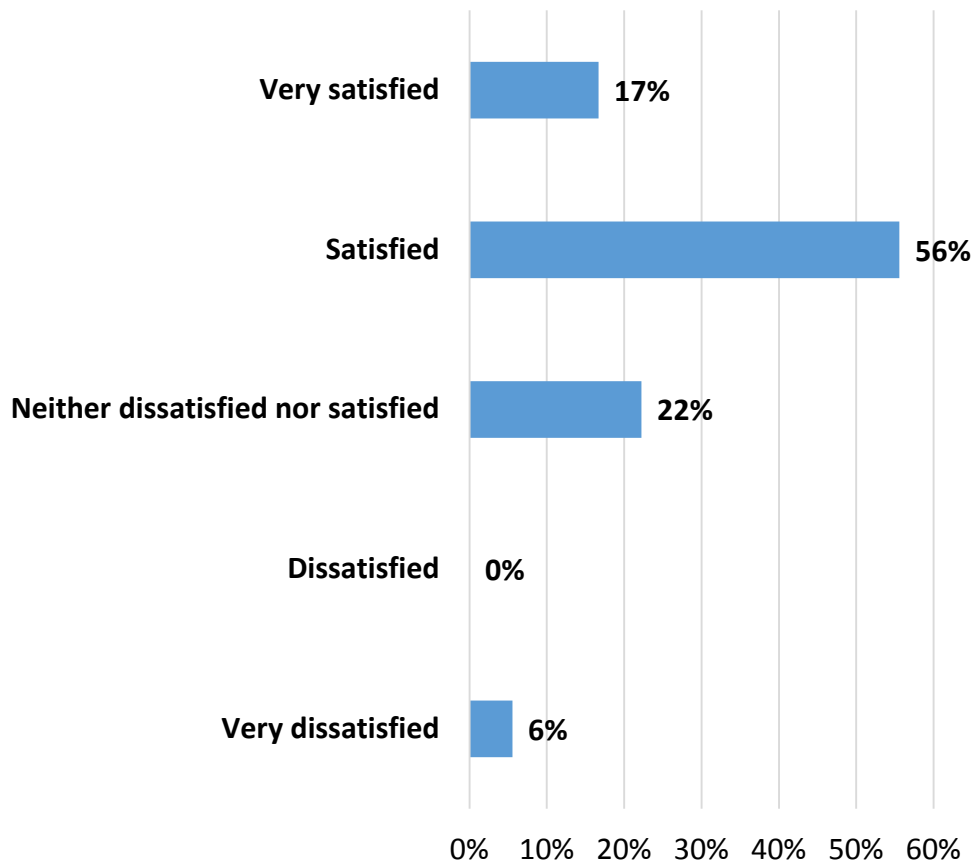
(n = 39)



## Figure 60

Satisfaction with royalties or lease payments (for those who have received royalties or lease payments)

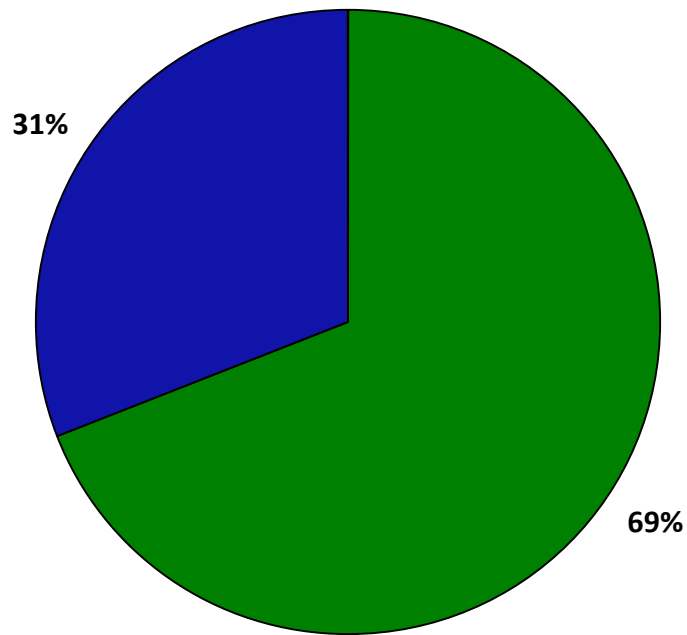
(n = 18)



## Figure 61

Employed (currently or formerly) in an occupation related to the oil and gas industry

(n = 42)

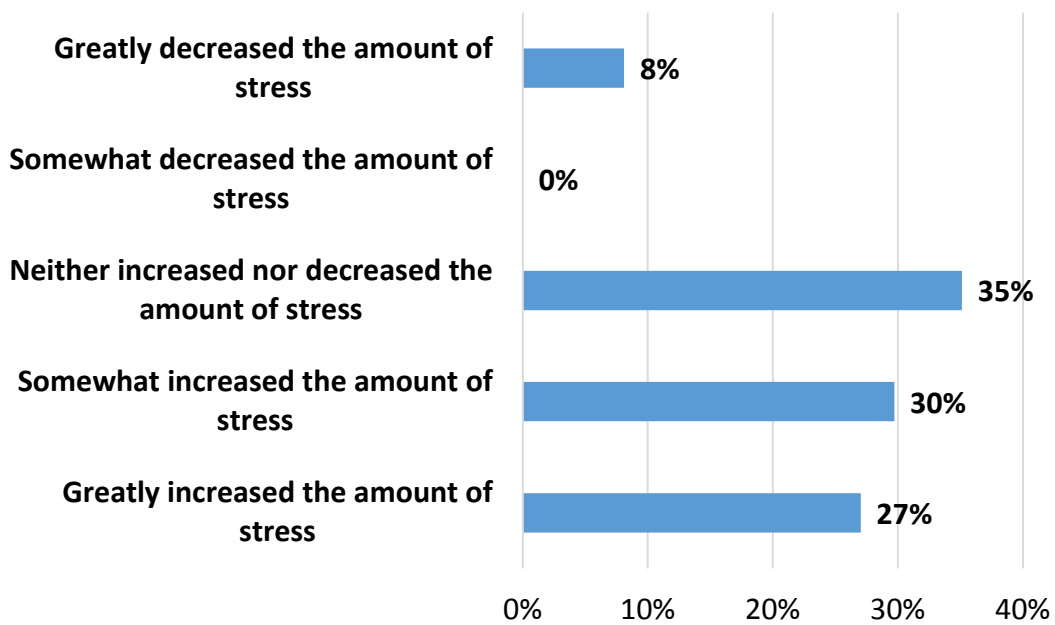


■ No ■ Yes

**Figure 62**

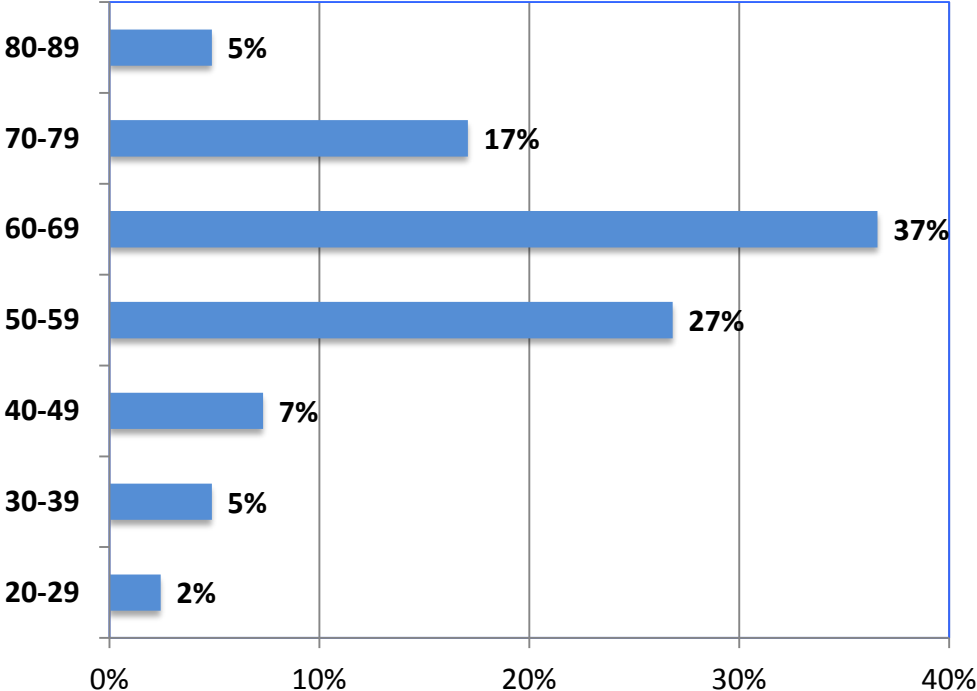
**Amount of stress associated with the drilling and production of oil and/or natural gas**

(n = 37)



**Figure 63**

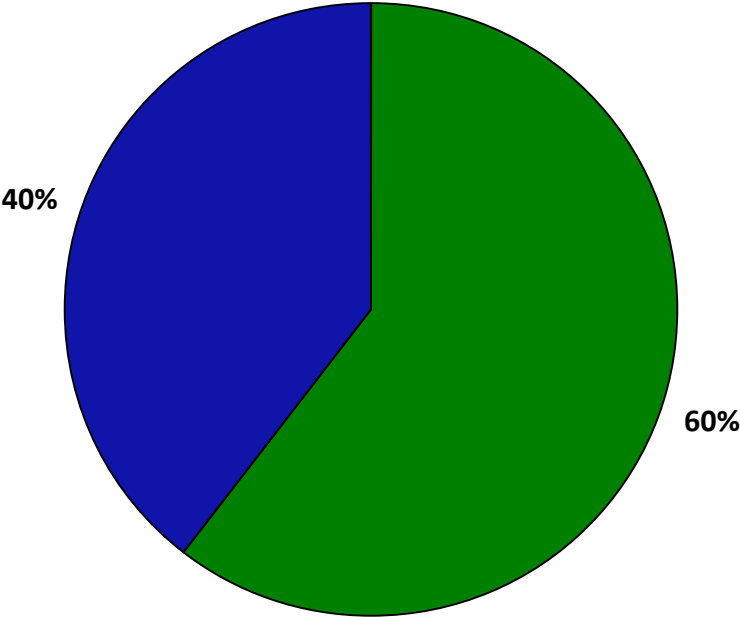
**Age**  
(n = 41)



**Figure 64**

**Gender**

(n = 43)



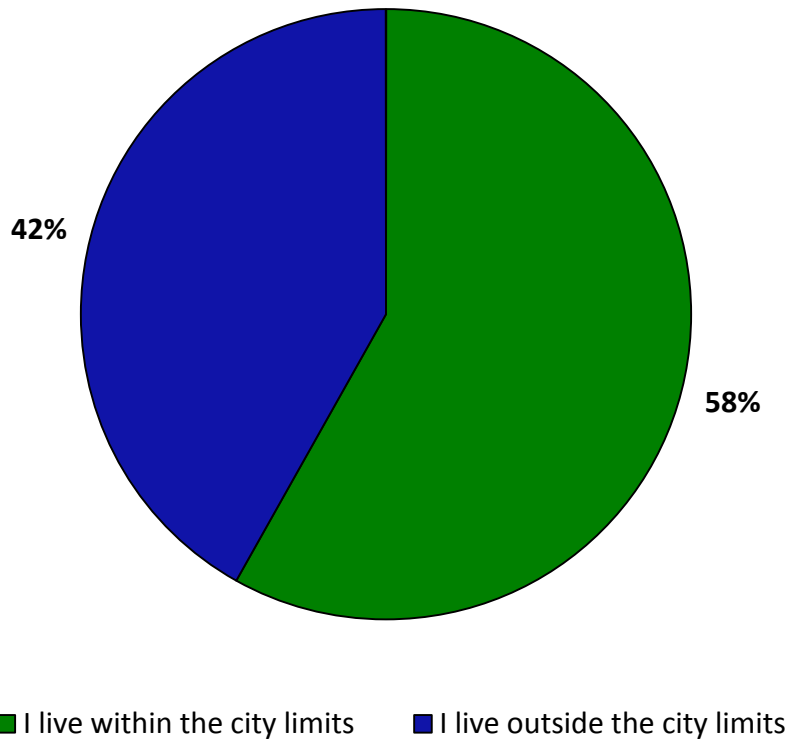
■ Male ■ Female



## Figure 65

### Location of Residence

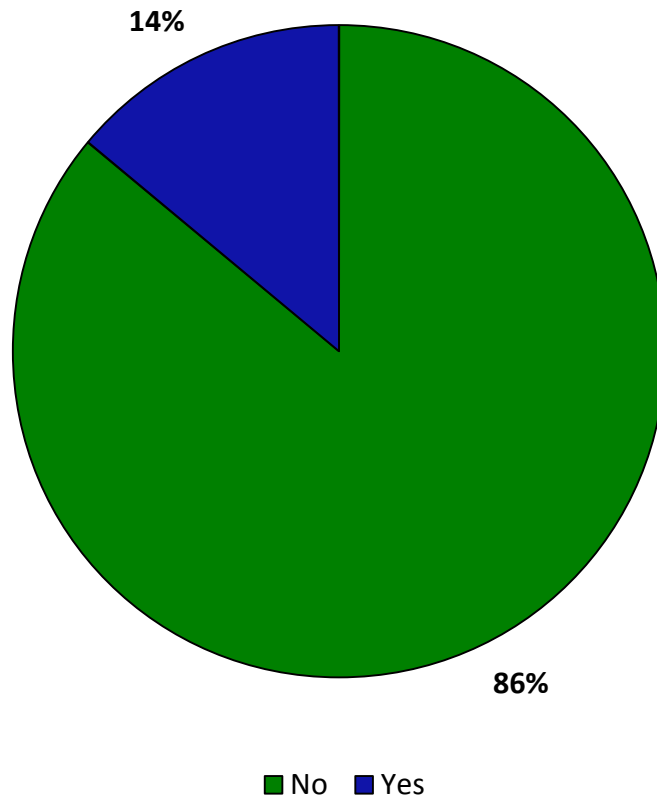
(n = 43)



## Figure 66

### Children under 18 in the home

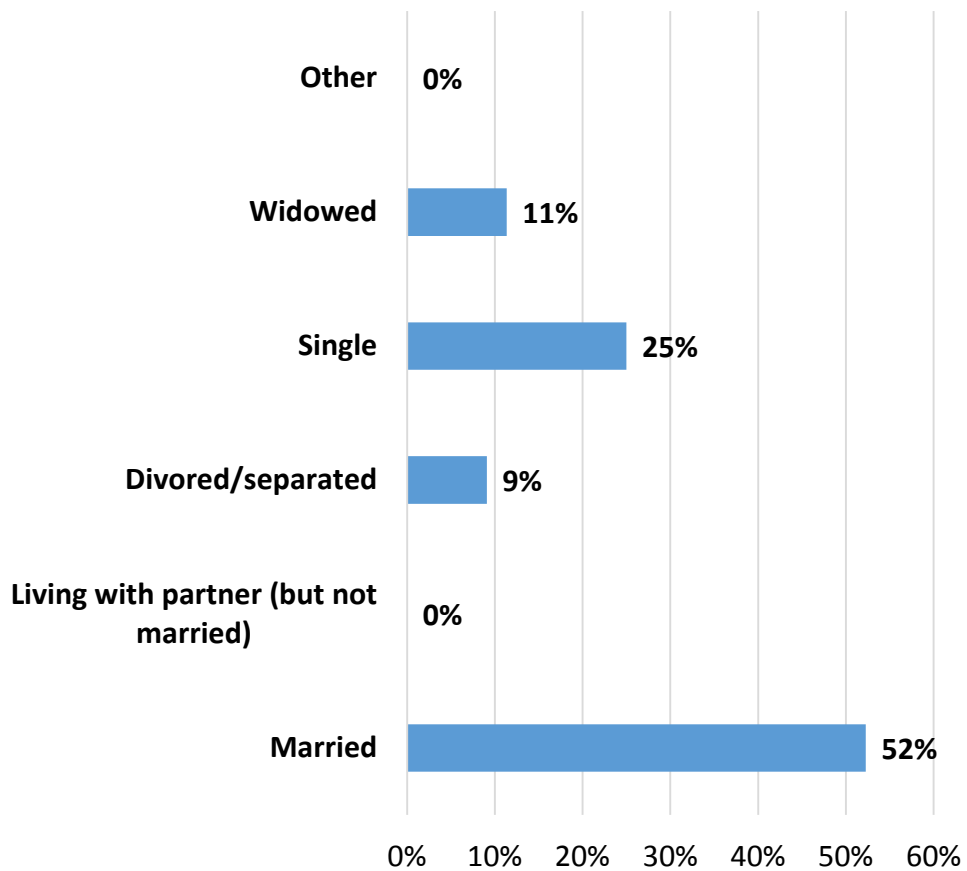
(n = 43)



**Figure 67**

**Marital status**

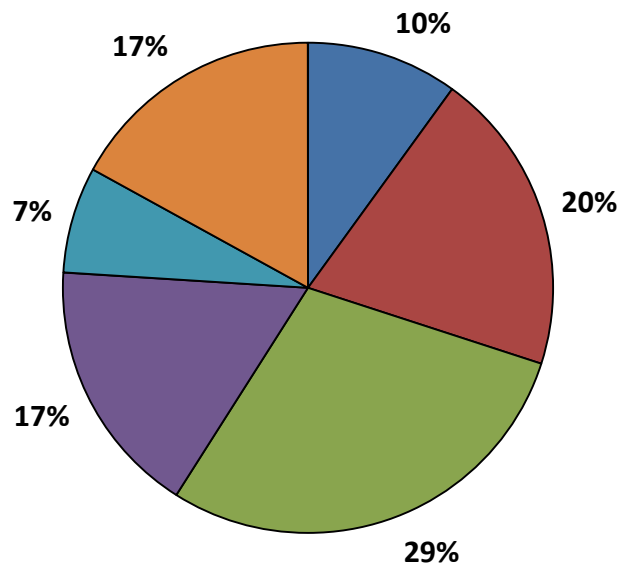
(n = 44)



**Figure 68**

**Level of education**

(n = 41)

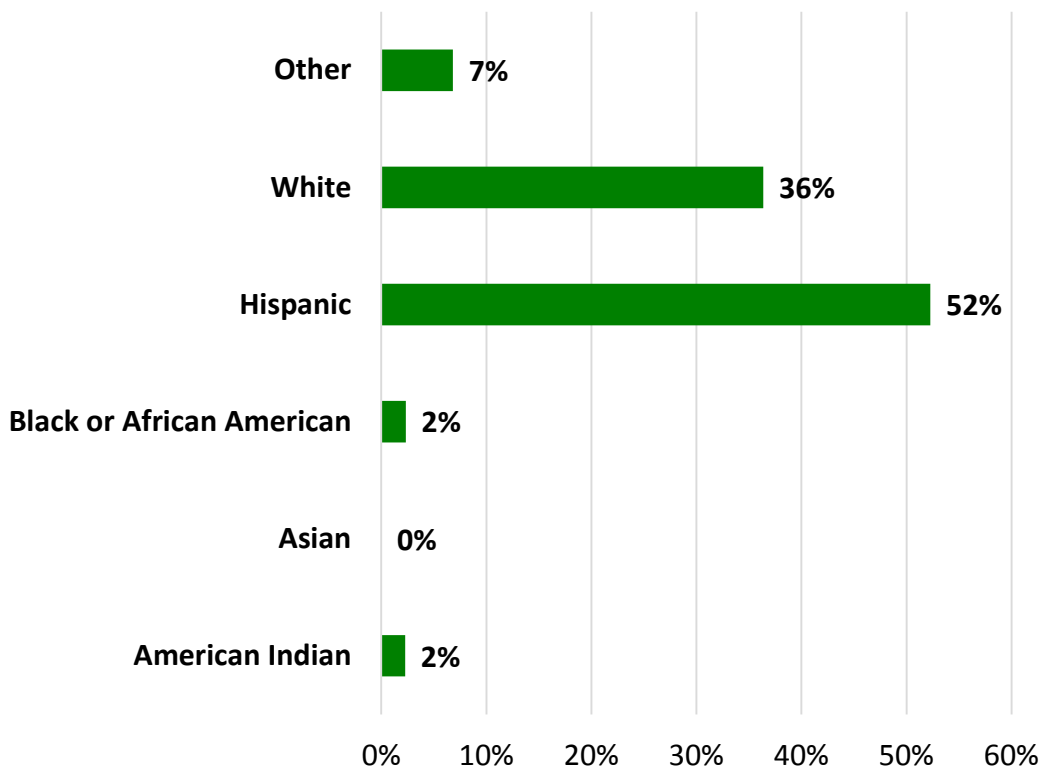


- Did not complete high school
- High school or equivalent
- Some college or post high school training
- Associate's or 2-year vocational degree
- Bachelor's degree
- Graduate/professional degree

**Figure 69**

**Race**

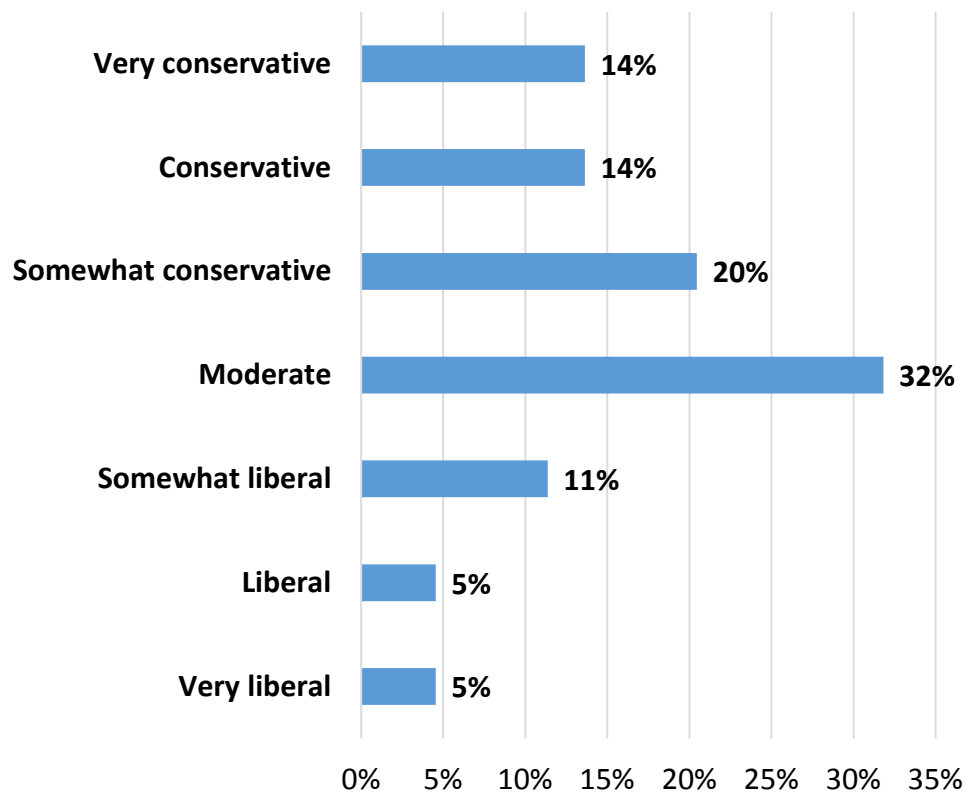
(n = 44)



**Figure 70**

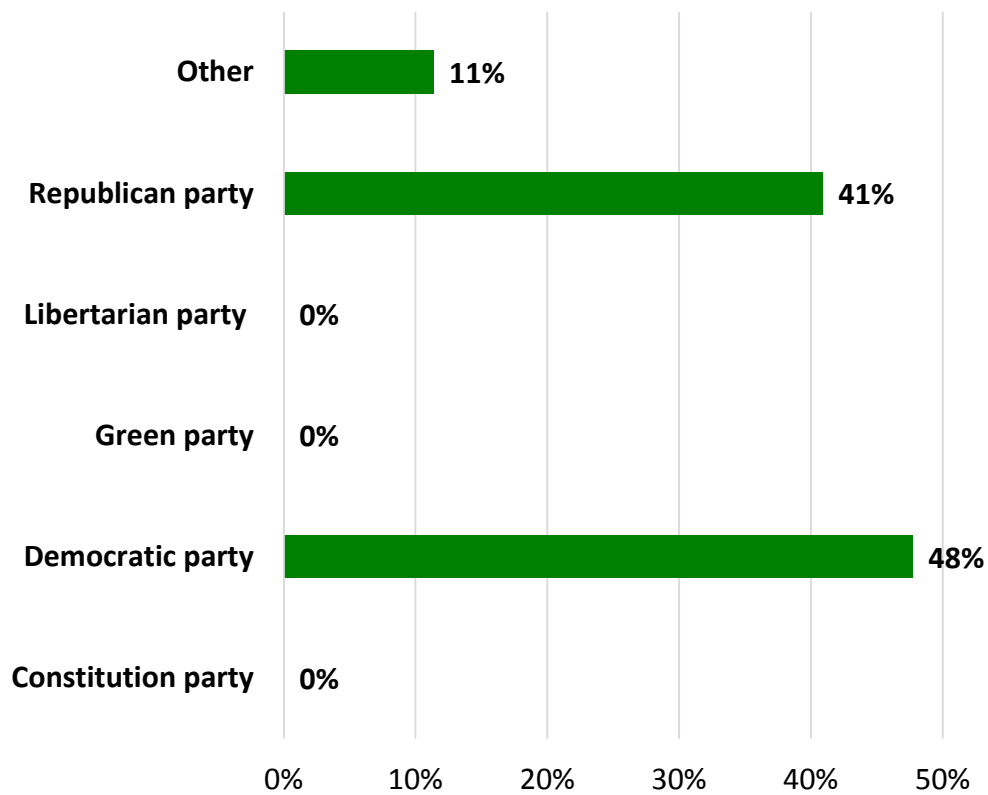
**Political views**

(n = 44)



**Figure 71**

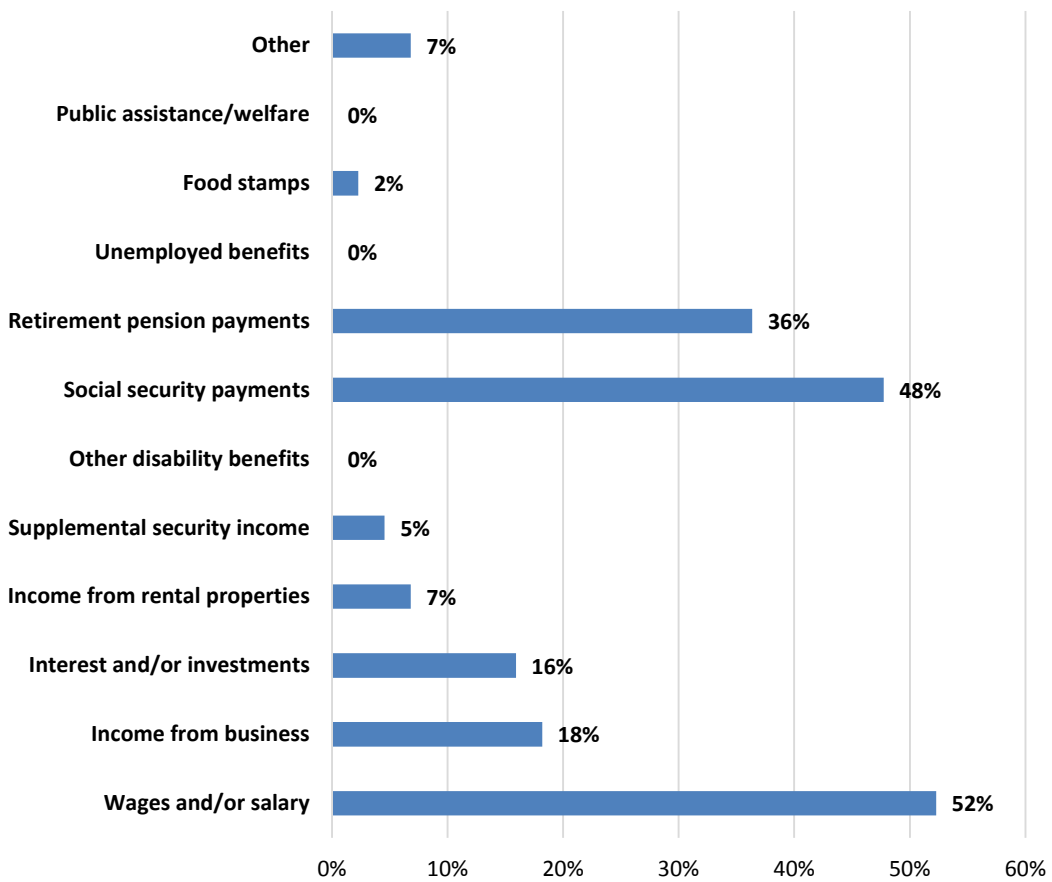
**Political party affiliation**  
(n = 44)



# Figure 72

## Sources of Income

(n = 44)

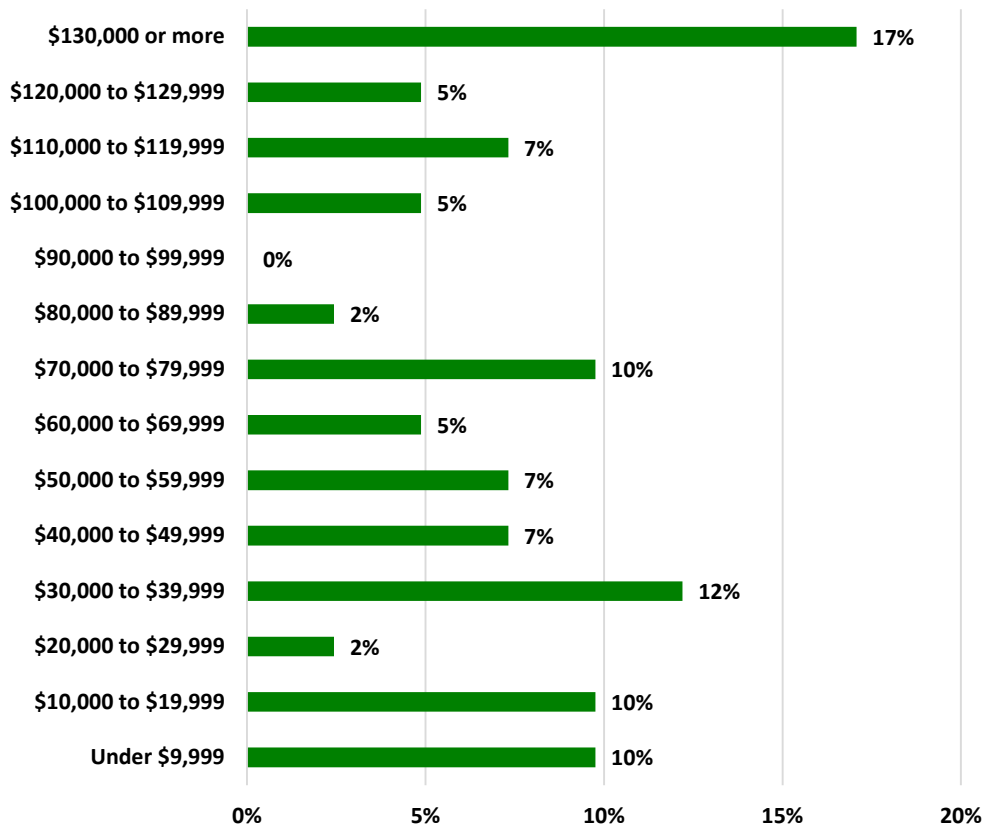




**Figure 73**

**2014 household income  
(before taxes)**

(n = 44)



---

## Note

All materials in this publication may be reproduced without permission of the author. However, a credit line would be appreciated. A suggested citation is: Theodori, Gene L. and Adrian B. Uzunian. 2015. *Public Perceptions of Oil and Natural Gas Development in La Salle County, Texas: A Summary Report*. Huntsville, TX: Center for Rural Studies, Sam Houston State University.