

Responsive Management™



FRESHWATER AND SALTWATER FISHING PARTICIPATION AMONG ALABAMA RESIDENTS

**Conducted for the
Alabama Department of Conservation and Natural Resources
by Responsive Management**

2011

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EXECUTIVE SUMMARY

INTRODUCTION AND METHODOLOGY

This study was conducted for the Alabama Department of Conservation and Natural Resources (hereinafter referred to as “the Department”) to determine freshwater and saltwater fishing participation, as well as effects on fishing participation caused by the Deepwater Horizon oil spill (also known as the BP oil spill) in the Gulf of Mexico in 2010. The study entailed a telephone survey of Alabama residents.

The telephone survey questionnaire was developed cooperatively by Responsive Management and the Department, based in part on past surveys that were administered, as well as on the research team’s familiarity with natural resources and outdoor recreation. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The survey was conducted in March 2011. The software used for data collection was Questionnaire Programming Language.

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. Note that participation can be calculated using two methods of analysis. One method calculates fishing participation on a per-household basis, determining the total number of people in the household and then the number of anglers of that household total (referred to as the Household Basis). The second analysis method calculates participation based solely on the individual being interviewed (Individual Basis). Both methods produce very similar proportional breakdowns.

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval (or higher). For a sample of Alabama residents of this size (6,006 completed interviews), the sampling error is at most plus or minus 1.26 percentage points.

FISHING PARTICIPATION

The data indicate that 26.9% of households in Alabama have at least one person who had fished in the previous 12 months.

Of the households with anglers, 79% had from 1 to 7 anglers who fished exclusively in freshwater, representing 4,083 anglers in the study who fished freshwater only. The mean was 1.96 anglers per household (among households with freshwater anglers) who fished exclusively in freshwater.

Of the households with anglers, 9% had from 1 to 5 anglers who fished exclusively in saltwater, representing 383 anglers in the study who fished saltwater only. The mean was 1.63 anglers per household (among households with saltwater anglers) who fished exclusively in saltwater.

The analysis broke down all anglers into those who fished freshwater only (74%), those who fished saltwater only (7%), and those who fished both freshwater and saltwater (19%), calculated on the Household Basis (Figure A).

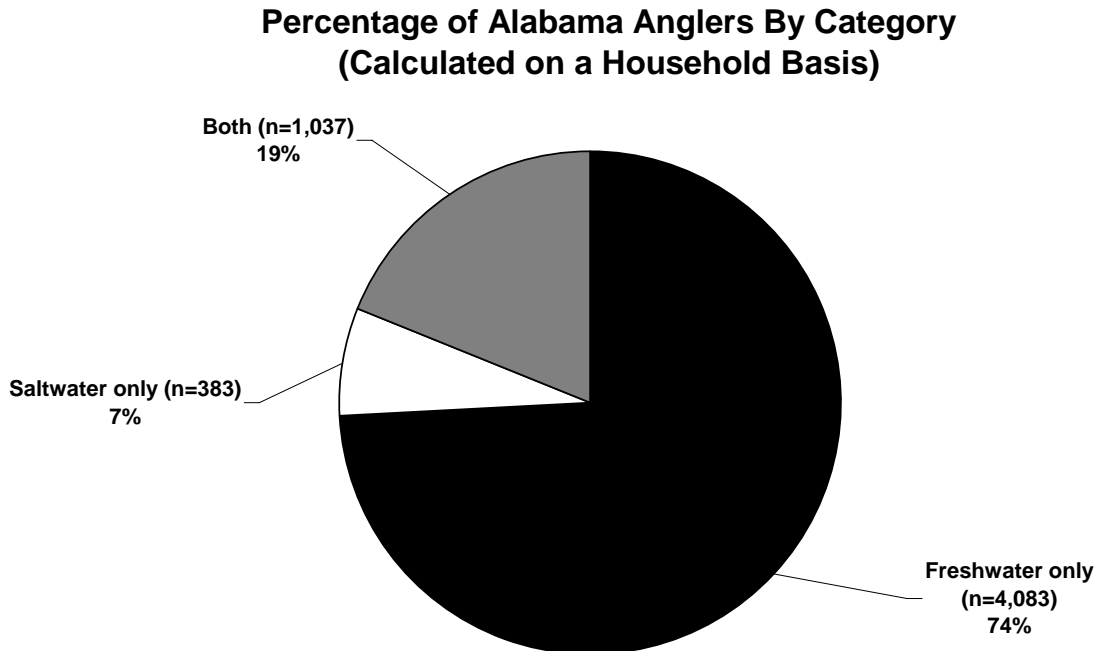


Figure A. Portion of Anglers Fishing Freshwater Exclusively, Saltwater Exclusively, and Both Freshwater and Saltwater Based on Household Respondent Data

Of households with anglers, 6% reported that no anglers in the household went freshwater fishing in Alabama in the past 12 months. The converse of this is that 94% of such households had anglers who had fished in freshwater. The mean number of anglers fishing in freshwater at least some of the time in households with freshwater anglers is 2.07 anglers.

Of households with anglers, 71% reported that no anglers in the household went saltwater fishing in Alabama in the past 12 months; meanwhile, 29% of households with anglers had anglers who had fished in saltwater. The mean number of anglers fishing in saltwater at least some of the time in households with saltwater anglers is 1.84 anglers.

The next two tables show the proportion of freshwater to saltwater anglers using two calculation methods. The first of these methods, the single-counting method, is shown in Table A. In this method, anglers who fish in both freshwater and saltwater are counted only once. To properly apportion those who fish in both waters into either freshwater or saltwater groups, two methods of calculating the proportions can be used in the single-counting method: the 50% split and the

proportional split. The “50% Split” column refers to evenly splitting anglers who fish both types of water into equal groups, one group for freshwater and one group for saltwater. The “Proportional Split” column splits anglers into the two groups in the same ratio as freshwater-only anglers to saltwater-only anglers. Table B shows the double-counting method where anglers who fish in both freshwater and saltwater are counted twice: once for their freshwater fishing and once for their saltwater fishing. Double counting them obviates the need to split them into groups; therefore, there are no columns for a “50% Split” or a “Proportional Split” in Table B.

Table A. Proportion of Freshwater to Saltwater Anglers Using Single-Counting Method (Household Basis)

Proportion of Freshwater and Saltwater Anglers				
Single-counting anglers in both waters				
	Count	%	50% Split	Proportional Split
Salt Only	383	6.96	16.38	8.58
Fresh Only	4,083	74.20	83.62	91.42
Salt & Fresh	1,037	18.84		
Total	5,503	100.00	100.00	100.00

Table B. Proportion of Freshwater to Saltwater Anglers Using Double-Counting Method (Household Basis)

Proportion of Freshwater and Saltwater Anglers			
Double-counting anglers in both waters			
	Count	%	The double-count method results in the following proportions: 78.29% freshwater 21.71% saltwater
Salt Only	383	5.86	
Fresh Only	4,083	62.43	
Salt & Fresh	1,037	15.86	
Salt & Fresh	1,037	15.86	
Total	6,540	100.00	

The last part of the section on fishing participation in this report shows the proportions of anglers who fish in freshwater, saltwater, and both waters calculated on an Individual Basis from the survey data (i.e., calculated based solely on the person who was interviewed, not on that person’s household data). In this analysis, 73% of anglers interviewed fished exclusively in freshwater, 6% fished exclusively in saltwater, and 21% fished in both waters (Figure B).

**Percentage of Alabama Anglers By Category
(Calculated on an Individual Basis)**

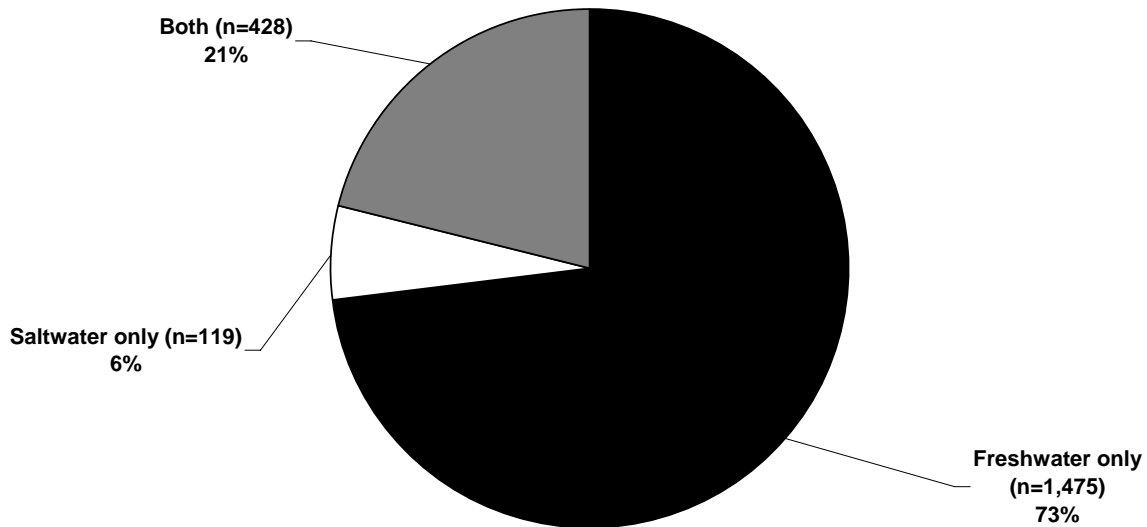


Figure B. Portion of Anglers Fishing Freshwater Exclusively, Saltwater Exclusively, and Both Freshwater and Saltwater Based on Individual Data

The analysis of freshwater and saltwater fishing on the individual basis, instead of the household basis, produces slightly different proportional splits of anglers vis-à-vis freshwater or saltwater. All discussion of methods for Tables A and B regarding how the anglers who fish in both waters are apportioned apply to these calculations on an individual basis. Table C shows the single-counting method, and Table D shows the double-counting method.

Table C. Proportion of Freshwater to Saltwater Anglers Using Single-Counting Method (Individual Basis)

Proportion of Freshwater and Saltwater Anglers				
Single-counting anglers in both waters				
	Count	%	50% Split	Proportional Split
Salt Only	119	5.90	16.49	7.49
Fresh Only	1,475	72.93	83.51	92.51
Salt & Fresh	428	21.17		
Total	2,023	100.00	100.00	100.00

Table D. Proportion of Freshwater to Saltwater Anglers Using Double-Counting Method (Individual Basis)

Proportion of Freshwater and Saltwater Anglers		
Double-counting anglers in both waters		
	Count	%
Salt Only	119	4.87
Fresh Only	1,475	60.19
Salt & Fresh	428	17.47
Salt & Fresh	428	17.47
Total	2,451	100.00

The double-count method results in the following proportions:
77.66% freshwater
22.34% saltwater

POSSIBLE CONSTRAINTS TO FISHING PARTICIPATION

Two open-ended questions (in which no answer set is read to respondents, who can respond with anything that comes to mind) explored possible constraints to fishing. The first of these questions asked for reasons that other people in the household had not fished in the previous 12 months, among those people whose household had some non-anglers in it. Lack of interest was the most important reason (52% of those who got the question gave this reason), far exceeding any other reason. Other important reasons include a lack of time because of work obligations (16%), a lack of access/having to travel too far/a feeling that there is no place to go (9%), health/age (also 9%), a lack of time because of family obligations (7%), and the Deepwater Horizon oil spill (5%).

The second open-ended question asked individuals who had not fished why they had not gone fishing. The top reason by far is lack of interest (46% of those who had not gone fishing gave this reason), followed by a lack of time because of work obligations (17%), a lack of access/having to travel too far/a feeling that there is no place to go (14%), a lack of time because of family obligations (9%), health/age (7%), and the Deepwater Horizon oil spill in the Gulf of Mexico (6%).

The survey included six questions in a series that explored possible reasons that respondents fished less or did not fish at all. Of the six constraints, one of them stood apart from the others, with a majority of respondents (55%) saying that the item *strongly* or *moderately* influenced them to fish less or not to fish at all: not enough time. No other possible constraint had a majority saying it influenced them. In fact, the remaining items are all very close, with from 20% to 27% saying the item *strongly* or *moderately* influenced them to fish less or not to fish at all. These are concern about fish contamination (27%), the Deepwater Horizon oil spill (25%), the quality of water or water pollution (23%), having to travel too far (22%), and a feeling of lacking skills (20%).

THE EFFECTS OF THE DEEPWATER HORIZON OIL SPILL ON FISHING PARTICIPATION IN ALABAMA

Awareness of the Deepwater Horizon oil spill was near universal: 99% of Alabama residents had heard of the oil spill prior to the survey.

At the time of the survey, 40% of Alabama residents indicated that they had made plans to visit or travel to Alabama's coastal region after April 20, 2010 (the date of the oil spill). That 40% includes the 22% who made plans and actually went, 3% who cancelled their plans unrelated to the oil spill, and 14% who cancelled their plans because of the oil spill.

Another question asked about planned fishing activities. Again, the 40% of people who had planned to visit Alabama's coastal region includes 12% who had planned to recreationally fish and 28% who had not planned to recreationally fish.

An analysis of data on several questions suggests that 16% of those who had planned to visit Alabama's coastal region cancelled plans that included recreational fishing because of the oil spill, which represents approximately 6% of *all* Alabama residents.

The survey also asked anglers directly if the oil spill influenced them to fish less or not to fish at all. The large majority of them (75%) were *not* influenced by the oil spill; conversely, 25% were influenced, broken down as 16% *strongly* influenced and 9% *moderately* influenced to fish less or to not fish at all.

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INTRODUCTION AND METHODOLOGY

This study was conducted for the Alabama Department of Conservation and Natural Resources (hereinafter referred to as “the Department”) to determine freshwater and saltwater fishing participation, as well as effects on fishing participation caused by the Deepwater Horizon oil spill (also known as the BP oil spill) in the Gulf of Mexico in 2010. The study entailed a telephone survey of Alabama residents. Specific aspects of the research methodology are discussed below.

USE OF TELEPHONES FOR THE SURVEY

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones among Alabama residents (both landlines and cell phones were called). Additionally, telephone surveys, relative to mail or Internet surveys, allow for more scientific sampling and data collection, provide higher quality data, obtain higher response rates, are more timely, and are more cost-effective. Telephone surveys also have fewer negative effects on the environment than do mail surveys because of reduced use of paper and reduced energy consumption for delivering and returning the questionnaires.

QUESTIONNAIRE DESIGN

The telephone survey questionnaire was developed cooperatively by Responsive Management and the Department, based in part on past surveys that were administered, as well as on the research team’s familiarity with natural resources and outdoor recreation. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey. The questionnaire is included in Appendix A.

SURVEY SAMPLE

Alabama residents were sampled in proportion to their county population, except for the two coastal counties (Baldwin and Mobile), which were purposely oversampled to ensure that there would be an adequate sample size for questions pertaining to saltwater fishing and saltwater anglers’ opinions. These two coastal counties were then weighted down to make them properly proportional to Alabama’s population statewide.

TELEPHONE INTERVIEWING FACILITIES

A central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of outdoor recreation and natural resources.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted a project briefing with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey questionnaire, reading of

the survey questions, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey questionnaire.

INTERVIEWING DATES AND TIMES

Telephone surveying times are Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday from noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The survey was conducted in March 2011.

TELEPHONE SURVEY DATA COLLECTION AND QUALITY CONTROL

The software used for data collection was Questionnaire Programming Language (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey questionnaire was programmed so that QPL branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection.

The Survey Center Managers and statisticians monitored the data collection, including monitoring of the actual telephone interviews without the interviewers' knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. The survey questionnaire itself contains error checkers and computation statements to ensure quality and consistent data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness. Responsive Management obtained a total of 6,006 completed interviews.

DATA ANALYSIS

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management. The results were weighted to properly proportion the two oversampled coastal counties within the total data set. Additionally, the results were weighted by age and gender so that the sample was representative of Alabama residents as a whole.

Note that participation can be calculated using two methods of analysis. One method calculates fishing participation on a per-household basis, determining the total number of people in the household and then the number of anglers of that household total (referred to as the Household Basis). The second analysis method calculates participation based solely on the individual being interviewed (Individual Basis). Both methods produce very similar proportional breakdowns.

SAMPLING ERROR

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval (or higher). For a sample of Alabama residents of this size (6,006 completed interviews), the sampling error is at most plus or minus 1.26 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 1.26 percentage points

of each other. Sampling error was calculated using the formula described in Figure 1, with a sample size of 6,006 and a population size (from U.S. Census data) of 4,625,354 Alabama residents 18 years old and older.

$$B = \left(\sqrt{\frac{N_p(.25) - .25}{N_s}} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)
N_p = population size (i.e., total number who could be surveyed)
N_s = sample size (i.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

Note: This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

Figure 1. Sampling Error Equation

FISHING PARTICIPATION

The data indicate that 26.9% of households in Alabama have at least one person who had fished in the previous 12 months. Table 1 shows that 43.9% of Alabama residents reported being in a household in which at least one person had fished in the previous 12 months; however, Table 1 does not account for non-responders who did not agree to take the full survey or refused to complete the survey because their household had no anglers in it. While every attempt was made to keep these people on the telephone to complete the full survey, many of them refused to do so, citing a lack of interest in the topic. Because of this, many of the non-responders did not have any anglers in their household. This led to a higher participation rate than actually exists: the participation rate in Table 1 of 43.9% of all households is high.

A more accurate participation rate was calculated by including those non-responders in the calculation of fishing participation, even though these people could not be included in the total of completed interviews and cannot be shown in the rest of the data. In this analysis, the 3,801 people who did not agree to be surveyed or terminated the interview before completion because no person in their household fished were put into the data. The adjusted data is shown in Table 2, which produces a household participation rate of 26.9%. Note that the non-responders do not affect any of the other data, because the remaining tables and graphs pertain to anglers only.

Table 1. Total Number of Anglers

Total number of people in household, age 6 or older, who have gone sport fishing in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	3,370	56.12	0
1	979	16.30	979
2	907	15.11	1,815
3	423	7.04	1,269
4	225	3.74	899
5	78	1.30	389
6	18	0.29	105
7	4	0.06	26
8	1	0.02	7
9	2	0.03	14
Total	6,006	100.00	5,503
2,636 (43.9%) have at least one person in the household who has been fishing in the past year			
Total of 5,503 anglers in 2,636 households			
Mean number of anglers per household (excluding those with 0 anglers) = 2.09 anglers			
Mode = 1; Median = 2			

Table 2. Total Number of Anglers When Accounting for Non-Responders

Total number of people in household, age 6 or older, who have gone sport fishing in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	7,171	73.12	0
1	979	9.98	979
2	907	9.25	1,815
3	423	4.31	1,269
4	225	2.29	899
5	78	0.79	389
6	18	0.18	105
7	4	0.04	26
8	1	0.01	7
9	2	0.02	14
Total	9,807	100.00	5,503
2,636 (26.9%) have at least one person in the household who has been fishing in the past year			

All data subsequently shown in this report does not include those 3,801 non-responders. For the rest of the data, the total household count is 6,006 (as shown in Table 1). Appendix B shows a detailed breakdown of fishing participation, by county.

Table 3 shows the results regarding fishing in freshwater only. Of the households with anglers, 79% had from 1 to 7 anglers who fished exclusively in freshwater, representing 4,083 anglers in the study who fished freshwater only. The mean was 1.96 anglers per household (among households with freshwater anglers) who fished exclusively in freshwater.

Table 3. Total Number of Anglers Fishing in Freshwater Exclusively

Total number of people in household, age 6 or older, who have fished only in freshwater in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	554	21.02	0
1	859	32.60	859
2	709	26.88	1,417
3	331	12.56	993
4	118	4.46	471
5	51	1.95	257
6	10	0.38	60
7	4	0.14	26
Total	2,636	100.00	4,083
Of the 2,636 households that had anglers, 2,082 (79.0%) reported having from 1 to 7 people who fished only in freshwater in the past 12 months			
Total of 4,083 exclusively freshwater anglers (74.2% of all anglers in the study)			
Mean number of exclusively freshwater anglers (excluding households with 0 exclusively freshwater anglers) = 1.96			
Mode = 1; Median = 2			

Figure 2 shows the breakdown of anglers into freshwater only versus all saltwater fishing. The majority of anglers (74%) fish freshwater exclusively. About a quarter (26%) fish some saltwater, but not necessarily exclusively. These percentages were calculated on a Household Basis.

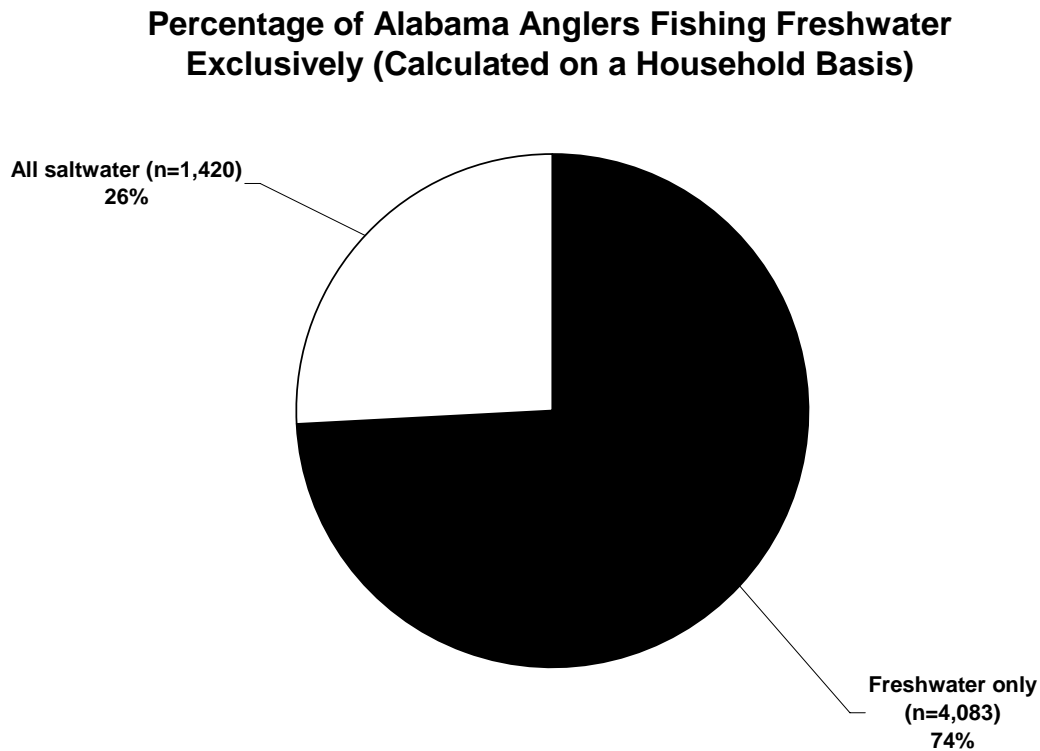


Figure 2. Portion of Anglers Fishing Freshwater Only

Analogous to the above, saltwater fishing was explored in the survey. Table 4 shows the results regarding fishing in saltwater only. Of the households with anglers, 9% had from 1 to 5 anglers who fished exclusively in saltwater, representing 383 anglers in the study who fished saltwater only. The mean was 1.63 anglers per household (among households with saltwater anglers) who fished exclusively in saltwater. Also included is Figure 3, which graphically shows the breakdown of anglers into saltwater only versus all freshwater fishing, which shows that 7% of all anglers in the study fished saltwater exclusively, calculated using a Household Basis.

Table 4. Total Number of Anglers Fishing in Saltwater Exclusively

Total number of people in household, age 6 or older, who have fished only in saltwater in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	2,400	91.07	0
1	140	5.33	140
2	57	2.18	115
3	23	0.86	68
4	14	0.53	56
5	1	0.03	4
Total	2,636	100.00	383

Of the 2,636 households that had anglers, 235 (8.9%) reported having from 1 to 5 people who fished only in saltwater in the past 12 months

Total of 383 exclusively saltwater anglers (7.0% of all anglers in the study)

Mean number of exclusively saltwater anglers (excluding households with 0 exclusively saltwater anglers) = 1.63

Mode = 1; Median = 1

Percentage of Alabama Anglers Fishing Saltwater Exclusively (Calculated on a Household Basis)

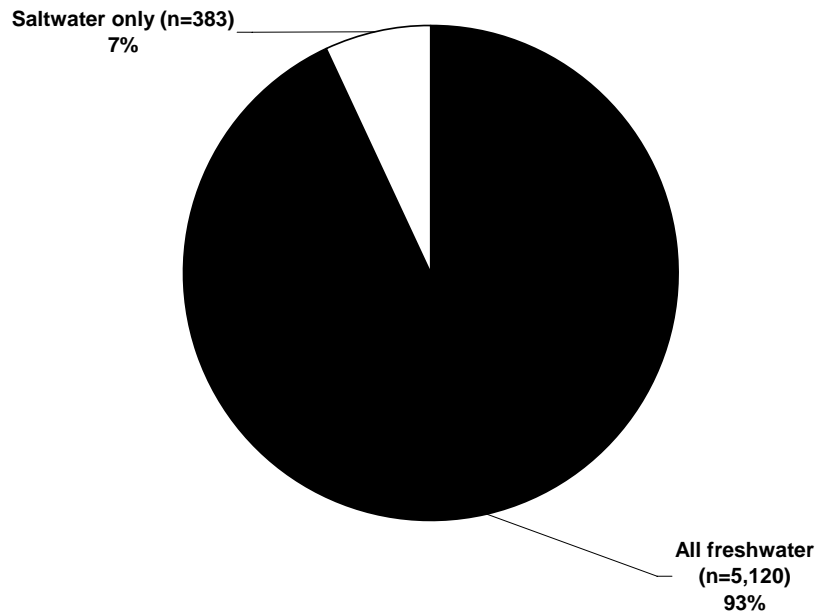


Figure 3. Portion of Anglers Fishing Saltwater Only

The next analysis examined anglers fishing in both freshwater and saltwater. Table 5 shows that 23% of households with anglers had anglers who had fished in both freshwater and saltwater in the past 12 months. This translates to 19% of all anglers in the study having fished in both

freshwater and saltwater. Figure 4 breaks down all anglers into those who fished freshwater only (74%), those who fished saltwater only (7%), and those who fished both freshwater and saltwater (19%), calculated on a Household Basis.

Table 5. Total Number of Anglers Fishing in Both Freshwater and Saltwater

Total number of people in household, age 6 or older, who have fished in both freshwater and saltwater in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	2,037	77.28	0
1	330	12.51	330
2	160	6.07	320
3	60	2.29	181
4	39	1.49	157
5	7	0.26	34
6	2	0.09	14
Total	2,636	100.00	1,037

Of the 2,636 households that had anglers, 599 (22.7%) reported having from 1 to 6 people who fished in freshwater and saltwater in the past 12 months

Total of 1,037 freshwater and saltwater anglers (18.8% of all anglers in the study)

Mean number of anglers fishing both freshwater and saltwater (excluding households with 0 anglers fishing both freshwater and saltwater) = 1.73

Mode = 1; Median = 1

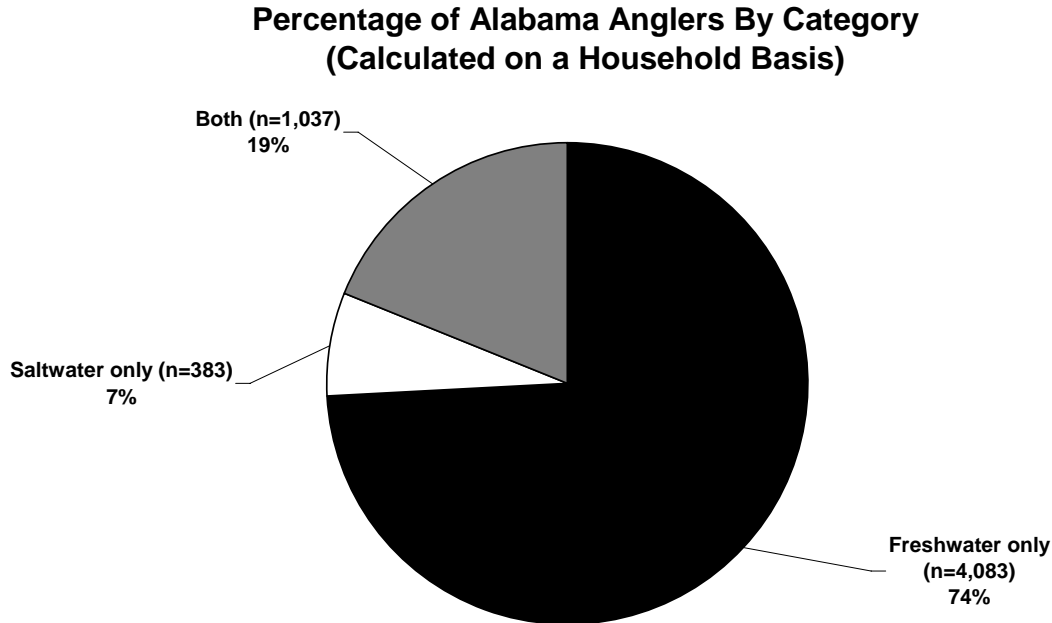


Figure 4. Portion of Anglers Fishing Freshwater Exclusively, Saltwater Exclusively, and Both Freshwater and Saltwater Based on Household Data

Table 6 shows anglers fishing in any freshwater in Alabama in the past 12 months. Of households with anglers, 6% reported that no anglers in the household went freshwater fishing in Alabama in the past 12 months. The converse of this is that 94% of such households had anglers who had fished in freshwater. The mean number of anglers fishing in freshwater at least some of the time in households with freshwater anglers is 2.07 anglers.

Table 6. Total Number of Anglers Fishing in Freshwater

Total number of people in household, age 6 or older, who have fished in freshwater in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	158	6.01	0
1	939	35.64	939
2	853	32.37	1,706
3	391	14.84	1,173
4	199	7.56	798
5	72	2.75	362
6	16	0.59	94
7	4	0.14	26
8	1	0.04	8
9	2	0.06	14
Total	2,636	100.00	5,120
Of the 2,636 households that had anglers, 2,477 (94.0%) reported having from 1 to 9 people who fished in freshwater in the past 12 months			
Total of 5,120 freshwater anglers (93.0% of all anglers in the study)			
Mean number of freshwater anglers per household (excluding households with 0 anglers who fished freshwater) = 2.07 anglers			
Mode = 1; Median = 2			

Analogous to above, saltwater fishing was examined, as shown in Table 7. Of households with anglers, 71% reported that no anglers in the household went saltwater fishing in Alabama in the past 12 months; meanwhile, 29% of households with anglers had anglers who had fished in saltwater. The mean number of anglers fishing in saltwater at least some of the time in households with saltwater anglers is 1.84 anglers.

Table 7. Total Number of Anglers Fishing in Saltwater

Total number of people in household, age 6 or older, who have fished in saltwater in Alabama during the past 12 months			
Number of People Fishing	Number of Households	Percent	Total Anglers
0	1,864	70.73	0
1	386	14.65	386
2	219	8.31	438
3	89	3.37	266
4	62	2.34	247
5	12	0.46	60
6	4	0.14	23
Total	2,636	100.00	1,420
Of the 2,636 households that had anglers, 771 (29.3%) reported having from 1 to 6 people who fished in saltwater in the past 12 months			
Total of 1,420 saltwater anglers (25.8% of all anglers in the study)			
Mean number of saltwater anglers per household (excluding households with 0 anglers who fished saltwater) = 1.84			
Mode = 1; Median = 1			

The next two tables show the proportion of freshwater to saltwater anglers using two calculation methods. The first of these methods, the single-counting method, is shown in Table 8. In this method, anglers who fish in both freshwater and saltwater are counted only once. To properly apportion those who fish in both waters into either freshwater or saltwater groups, two methods of calculating the proportions can be used in the single-counting method: the 50% split and the proportional split. The “50% Split” column refers to evenly splitting anglers who fish both types of water into equal groups, one group for freshwater and one group for saltwater. The “Proportional Split” column splits anglers into the two groups in the same ratio as freshwater-only anglers to saltwater-only anglers. Table 9 shows the double-counting method where anglers who fished in both freshwater and saltwater are counted twice: once for their freshwater fishing and once for their saltwater fishing. Double counting them obviates the need to split them into groups; therefore, there are no columns for a “50% Split” or a “Proportional Split” in Table 9.

Table 8. Proportion of Freshwater to Saltwater Anglers Using Single-Counting Method (Household Basis)

Proportion of Freshwater and Saltwater Anglers				
Single-counting anglers in both waters				
	Count	%	50% Split	Proportional Split
Salt Only	383	6.96	16.38	8.58
Fresh Only	4,083	74.20	83.62	91.42
Salt & Fresh	1,037	18.84		
Total	5,503	100.00	100.00	100.00

Table 9. Proportion of Freshwater to Saltwater Anglers Using Double-Counting Method (Household Basis)

Proportion of Freshwater and Saltwater Anglers		
Double-counting anglers in both waters		
	Count	%
Salt Only	383	5.86
Fresh Only	4,083	62.43
Salt & Fresh	1,037	15.86
Salt & Fresh	1,037	15.86
Total	6,540	100.00

The double-count method results in the following proportions:
78.29% freshwater
21.71% saltwater

The last part of the section on fishing participation in this report shows the proportions of anglers who fish in freshwater, saltwater, and both waters calculated on an Individual Basis from the survey data (i.e., calculated based solely on the person who was interviewed, not on that person’s household data). In this analysis, 73% of anglers interviewed fished exclusively in freshwater, 6% fished exclusively in saltwater, and 21% fished in both waters (Figure 5).

Percentage of Alabama Anglers By Category (Calculated on an Individual Basis)

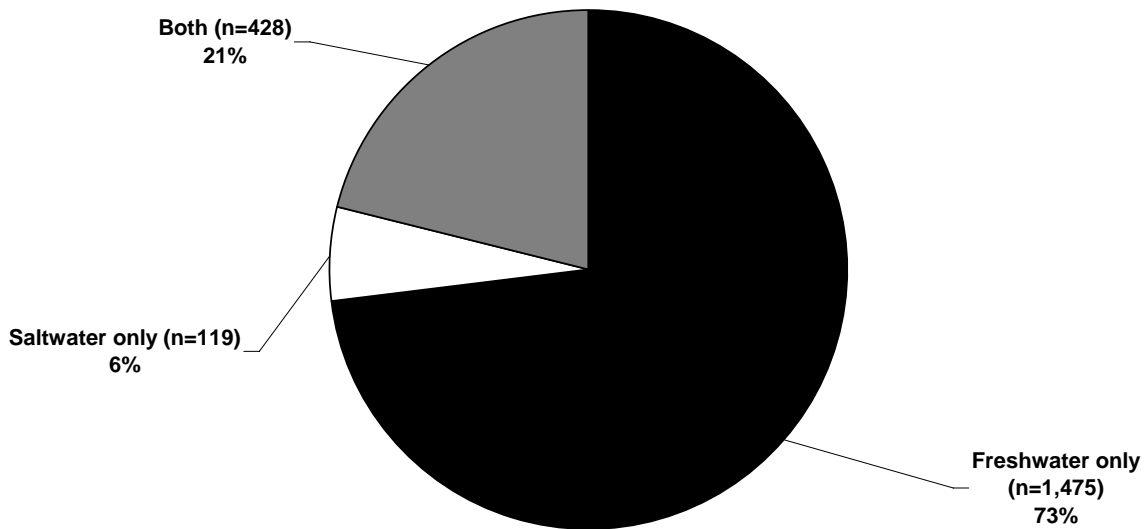


Figure 5. Portion of Anglers Fishing Freshwater Exclusively, Saltwater Exclusively, and Both Freshwater and Saltwater Based on Individual Respondent Data

The analysis of freshwater and saltwater fishing on the individual basis, instead of the household basis, produces slightly different proportional splits of anglers vis-à-vis freshwater or saltwater. All discussion of methods for Tables 8 and 9 regarding how the anglers who fish in both waters are apportioned apply to these calculations on an individual basis. Table 10 shows the single-counting method, and Table 11 shows the double-counting method.

Table 10. Proportion of Freshwater to Saltwater Anglers Using Single-Counting Method (Individual Basis)

Proportion of Freshwater and Saltwater Anglers				
Single-counting anglers in both waters				
	Count	%	50% Split	Proportional Split
Salt Only	119	5.90	16.49	7.49
Fresh Only	1,475	72.93	83.51	92.51
Salt & Fresh	428	21.17		
Total	2,023	100.00	100.00	100.00

Table 11. Proportion of Freshwater to Saltwater Anglers Using Double-Counting Method (Individual Basis)

Proportion of Freshwater and Saltwater Anglers				
Double-counting anglers in both waters				
	Count	%	The double-count method results in the following proportions: 77.66% freshwater 22.34% saltwater	
Salt Only	119	4.87		
Fresh Only	1,475	60.19		
Salt & Fresh	428	17.47		
Salt & Fresh	428	17.47		
Total	2,451	100.00		

POSSIBLE CONSTRAINTS TO FISHING PARTICIPATION

Two open-ended questions (in which no answer set is read to respondents, who can respond with anything that comes to mind) explored possible constraints to fishing. The first of these questions asked for reasons that other people in the household had not fished in the previous 12 months, among those people whose household had some non-anglers in it (Figure 6). Lack of interest was the most important reason (52% of those who got the question gave this reason), far exceeding any other reason. Other important reasons include a lack of time because of work obligations (16%), a lack of access/having to travel too far/a feeling that there is no place to go (9%), health/age (also 9%), a lack of time because of family obligations (7%), and the Deepwater Horizon oil spill (also known as the BP oil spill) (5%). Because the list of reasons is long, this graph is given a full page (Figure 6, next page).

The second open-ended question asked individuals who had not fished why they had not gone fishing (Figure 7). The top reason by far is lack of interest (46% of those who had not gone fishing gave this reason), followed by a lack of time because of work obligations (17%), a lack of access/having to travel too far/a feeling that there is no place to go (14%), a lack of time because of family obligations (9%), health/age (7%), and the Deepwater Horizon oil spill in the Gulf of Mexico (6%). This graph also is given a full page because the full listing of reasons is long.

Note that the Deepwater Horizon oil spill as a constraint to fishing participation is discussed more fully further on in this report.

Q39. Not including yourself this time, why didn't [anyone else / those who didn't fish] age 6 years old and older and residents of Alabama go [fishing / freshwater fishing / saltwater fishing] in Alabama in the past 12 months? (Asked of those who have someone in their household, not including themselves, that did not go recreational freshwater and/or saltwater fishing in Alabama in the past 12 months.)

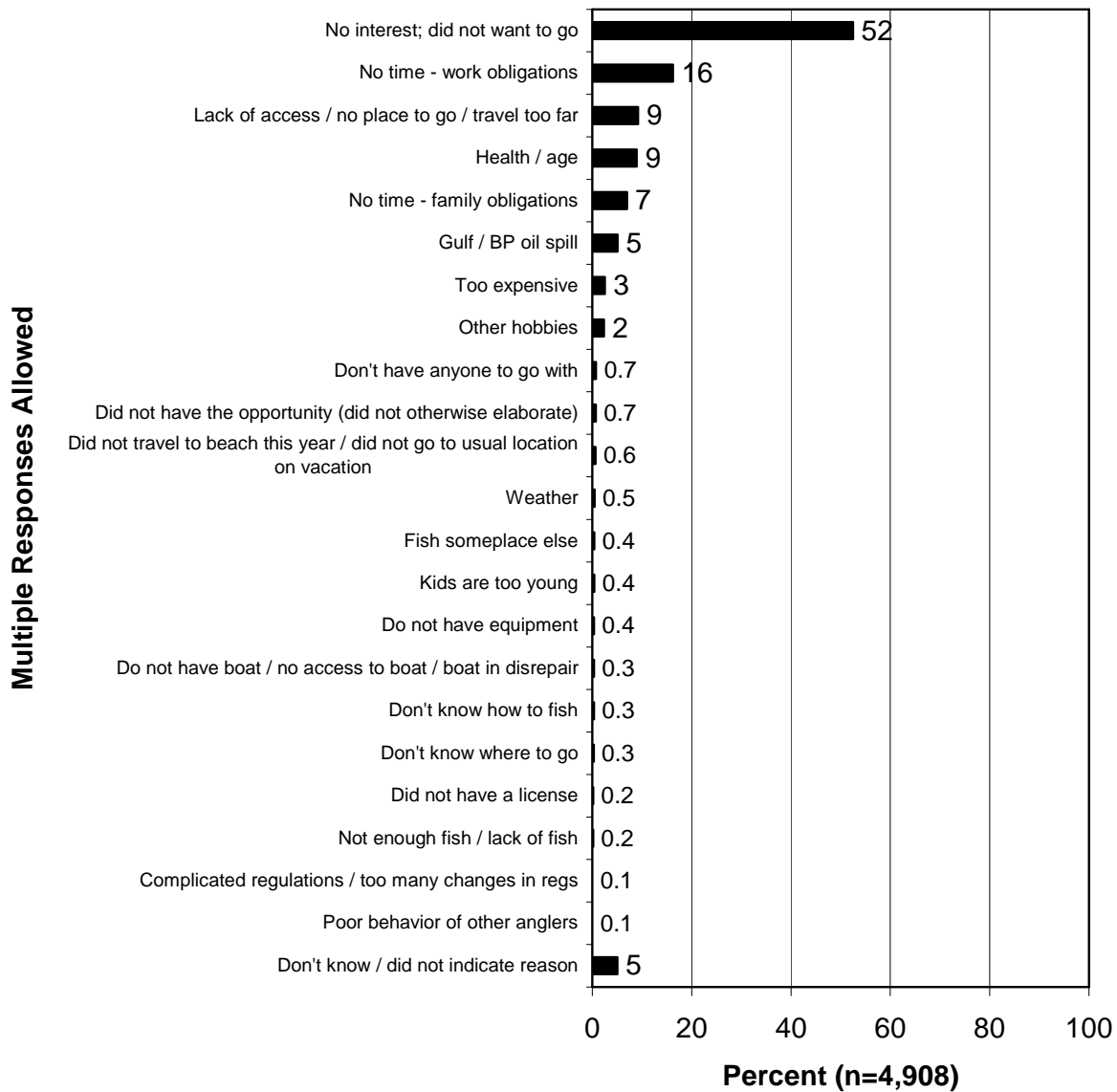


Figure 6. Reasons That Respondent's Housemates Did Not Fish

Q47. Why didn't you personally go [fishing / freshwater fishing / saltwater fishing] in Alabama in the past 12 months? (Asked of those who personally did not go recreational freshwater and/or saltwater fishing in Alabama in the past 12 months.)

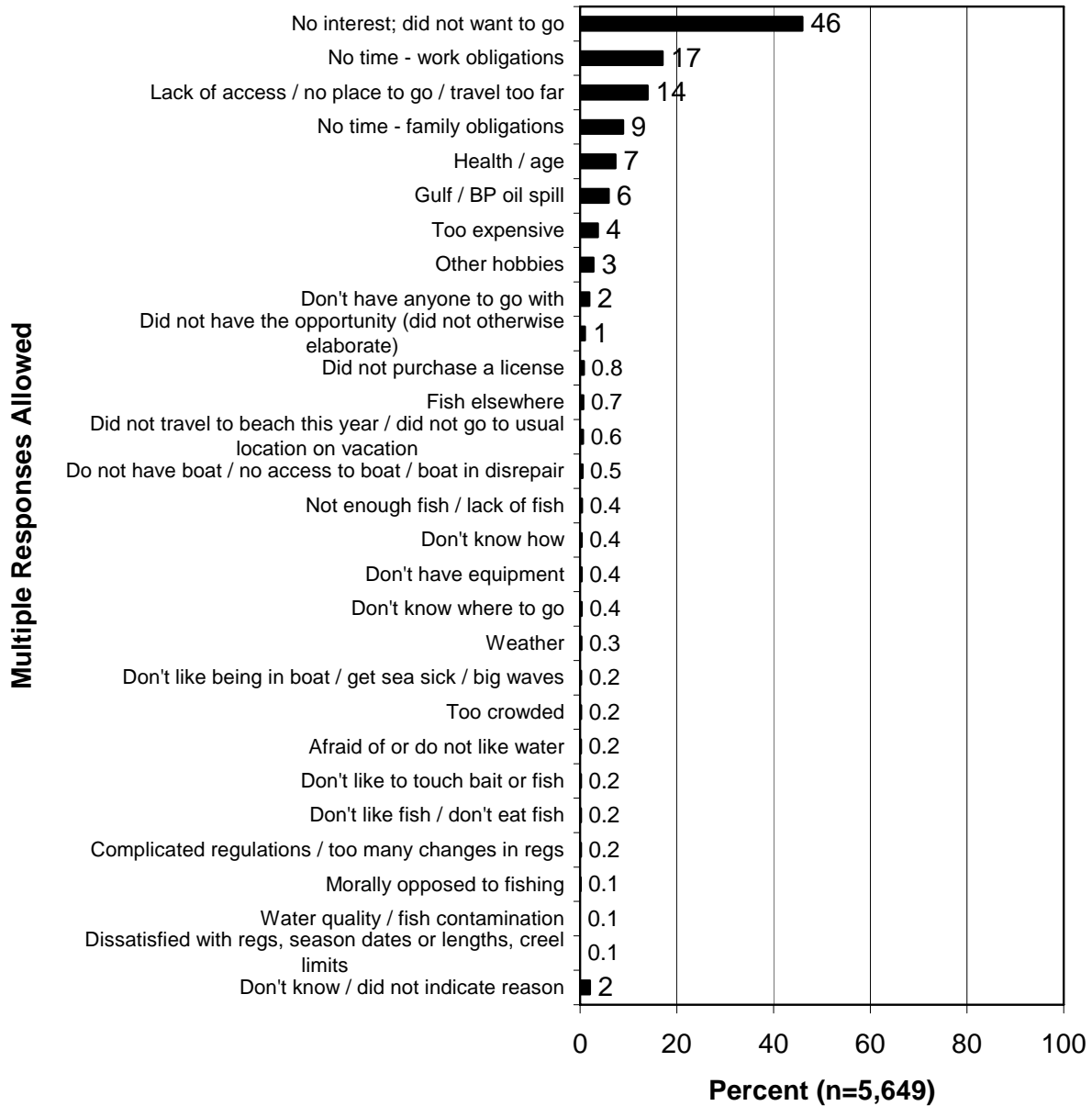


Figure 7. Reasons That Respondent Did Not Fish

The survey included six questions in a series that explored possible reasons that respondents fished less or did not fish at all. These questions were asked individually, but it is useful to examine the results of all the questions against each other, giving the relative importance of possible reasons. Note that the beginning point in the series of questions was randomized so that not all respondents received the list in the same order. This was done to eliminate any “order bias,” which is the effect that a previous question may have on a subsequent question.

These results are shown in three graphs. Figure 8 shows the percentages who said that each item *strongly* influenced them to fish less or not to fish at all; Figure 9 shows the percentages who said that each item *strongly* or *moderately* influenced them to fish less or not to fish at all; and Figure 10 shows the percentages who said that each item *did not* influence them to fish less or not to fish at all.

Of the six constraints, one of them stood apart from the others, with a majority of respondents (55%) saying that the item *strongly* or *moderately* influenced them to fish less or not to fish at all: not enough time. No other possible constraint had a majority saying it influenced them. In fact, the remaining items are all very close, with from 20% to 27% saying the item *strongly* or *moderately* influenced them to fish less or not to fish at all. These are concern about fish contamination (27%), the Deepwater Horizon oil spill (25%), the quality of water or water pollution (23%), having to travel too far (22%), and a feeling of lacking skills (20%).

Note that some of these individual questions are included in the next section in which the effects of the Deepwater Horizon oil spill on fishing participation is examined.

Percent who indicated that the following strongly influenced them personally to fish less or not at all in Alabama in the past 12 months.

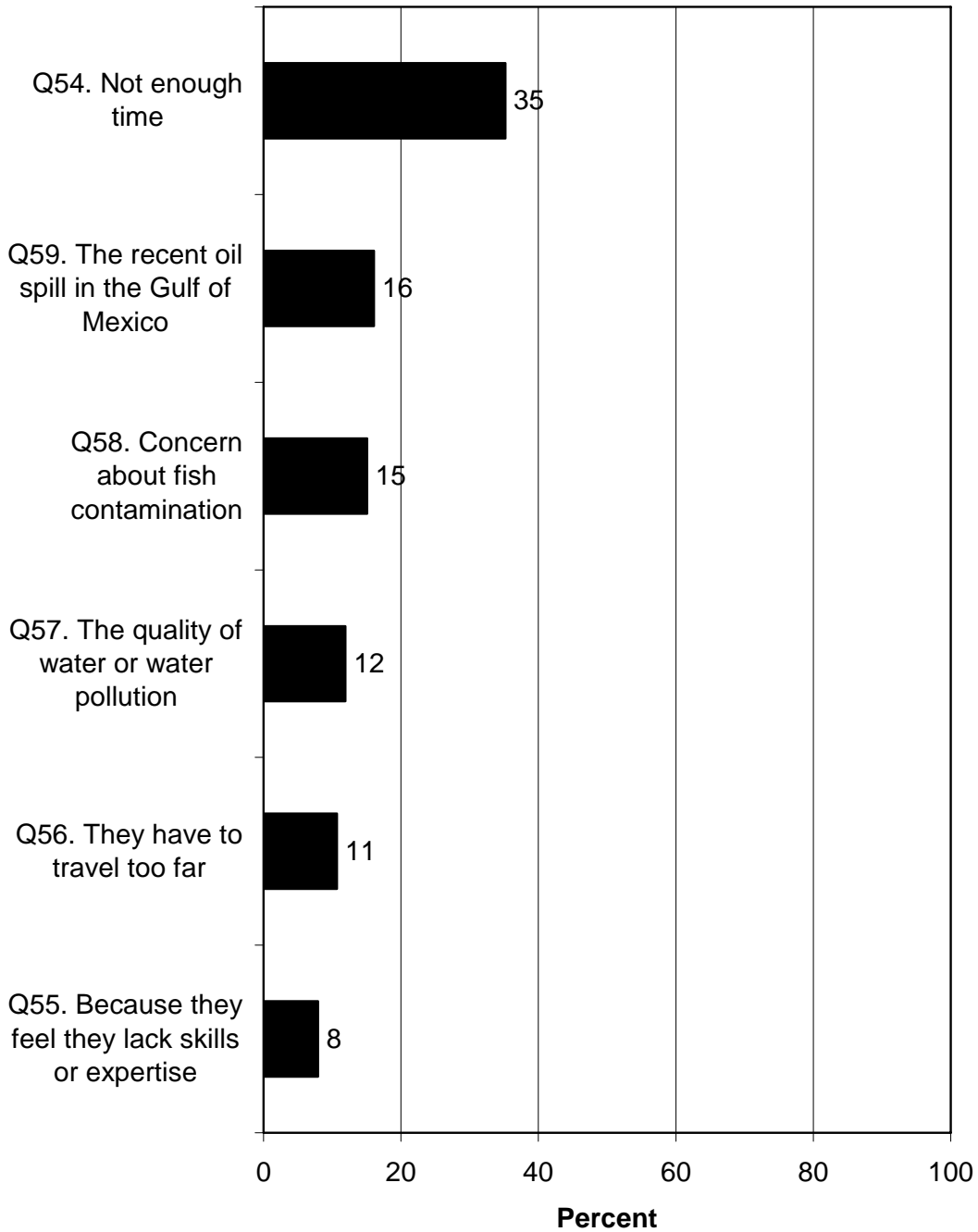


Figure 8. Percent Who Say the Following Possible Constraints Strongly Influenced Them to Fish Less or Not to Fish at All

Percent who indicated that the following strongly or moderately influenced them personally to fish less or not at all in Alabama in the past 12 months.

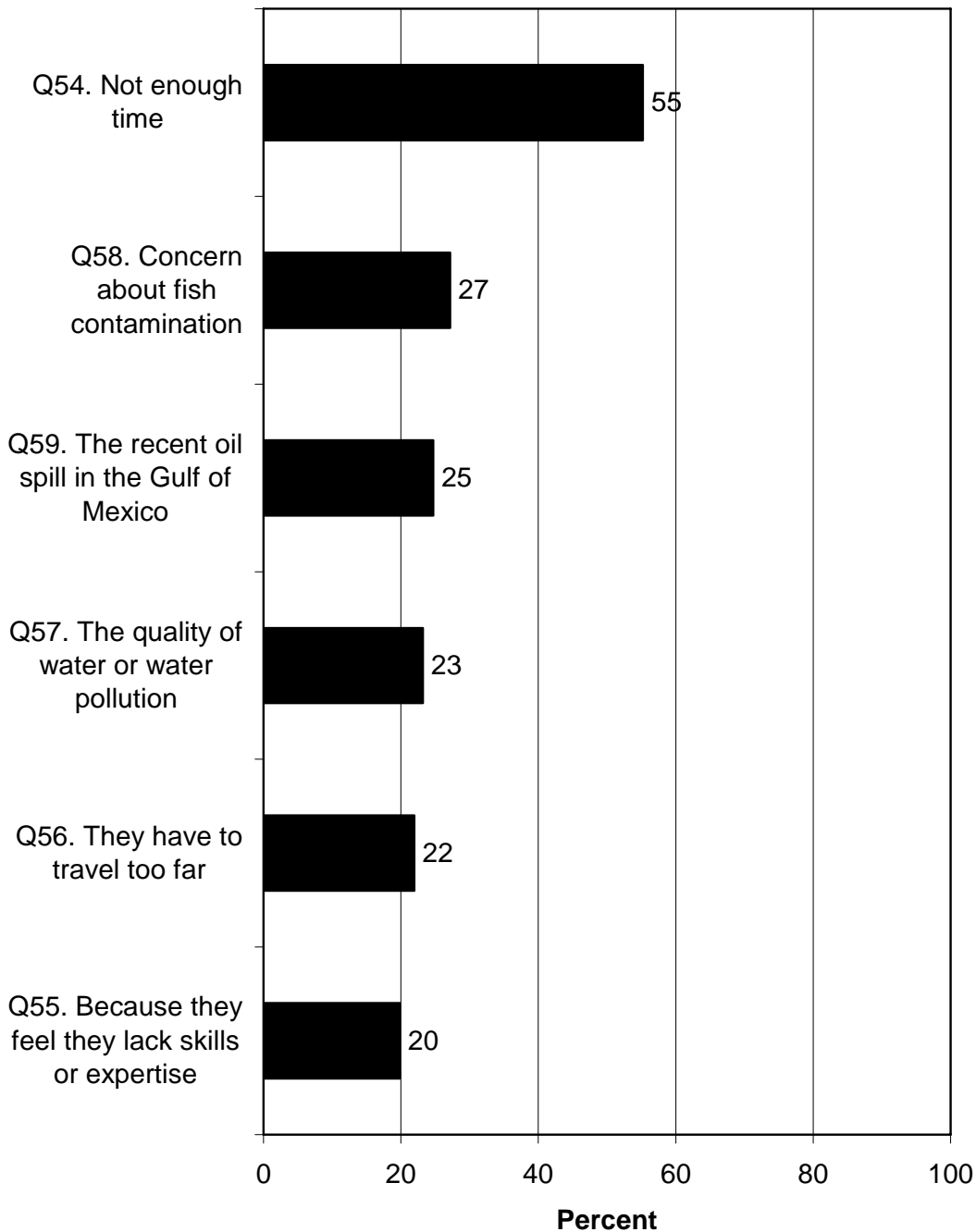


Figure 9. Percent Who Say the Following Possible Constraints Strongly or Moderately Influenced Them to Fish Less or Not to Fish at All

Percent who indicated that the following did not at all influence them personally to fish less or not at all in Alabama in the past 12 months.

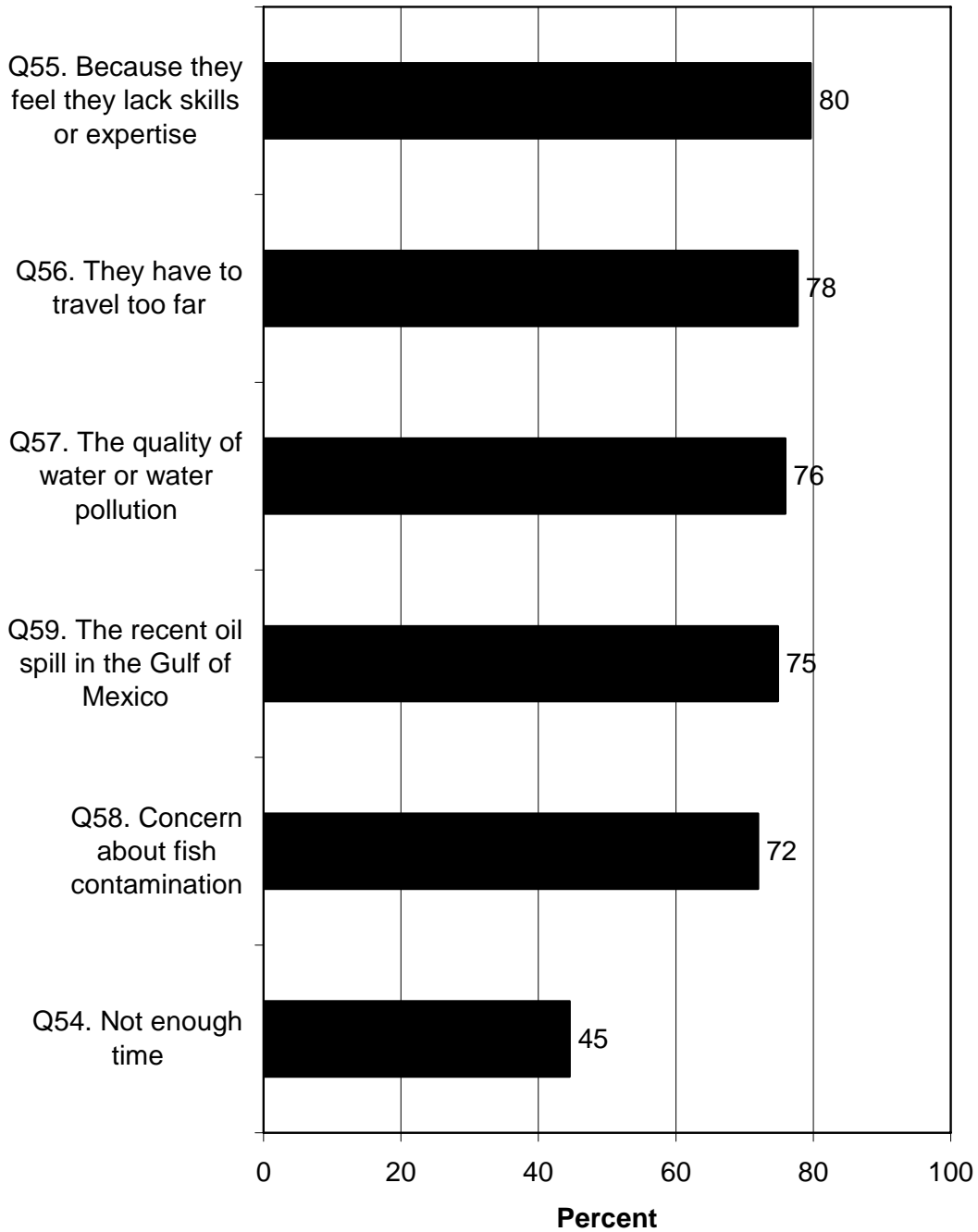


Figure 10. Percent Who Say the Following Possible Constraints Did Not Influence Them to Fish Less or Not to Fish at All

THE EFFECTS OF THE DEEPWATER HORIZON OIL SPILL ON FISHING PARTICIPATION IN ALABAMA

Awareness of the Deepwater Horizon oil spill (also known as the BP oil spill or simply referred to as “the oil spill that occurred in the Gulf of Mexico” in the question wording) was near universal: 99% of Alabama residents had heard of the oil spill prior to the survey (Figure 11).

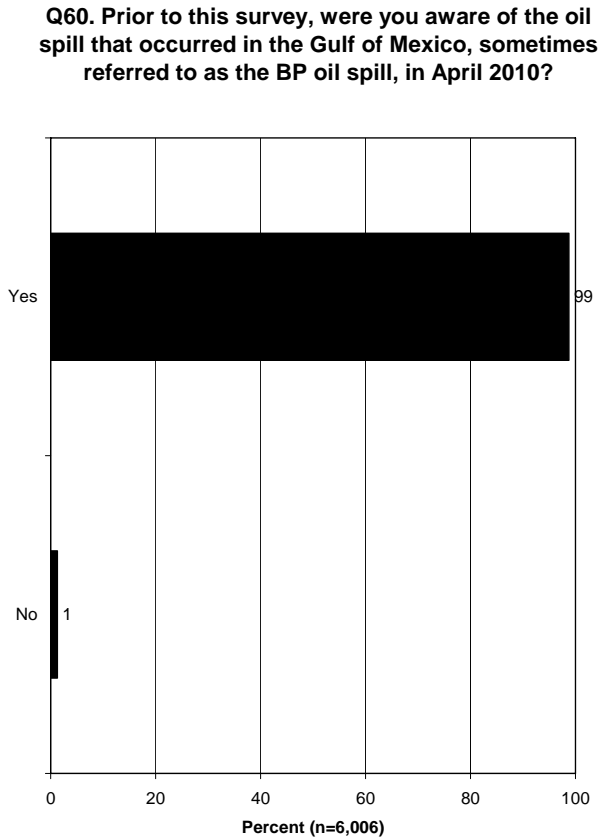


Figure 11. Awareness of the Deepwater Horizon Oil Spill

While there was near-universal awareness of the oil spill, the survey sought to determine its effect on visitation to the Gulf of Mexico within Alabama and fishing activity in the Gulf of Mexico in Alabama waters. The survey used several questions to help determine this, shown in Figures 12 and 13. At the time of the survey, 40% of Alabama residents indicated that they had made plans to visit or travel to Alabama’s coastal region after April 20, 2010 (the date of the oil spill). That 40% includes the 22% who made plans and actually went, 3% who cancelled their plans unrelated to the oil spill, and 14% who cancelled their plans because of the oil spill (Figure 12). In addition, Figure 13 shows the percentages out of those who had planned to visit the coastal area; among those who had planned to visit, just over a third (35%) cancelled plans because of the oil spill.

Q62. Prior to the oil spill in the Gulf of Mexico, did you plan to personally visit or travel to Alabama's coastal region on or after April 20, 2010?

IF SO:

Q63. Were your plans to visit or travel to Alabama's coastal region on or after April 20, 2010, canceled because of the oil spill in the Gulf of Mexico?

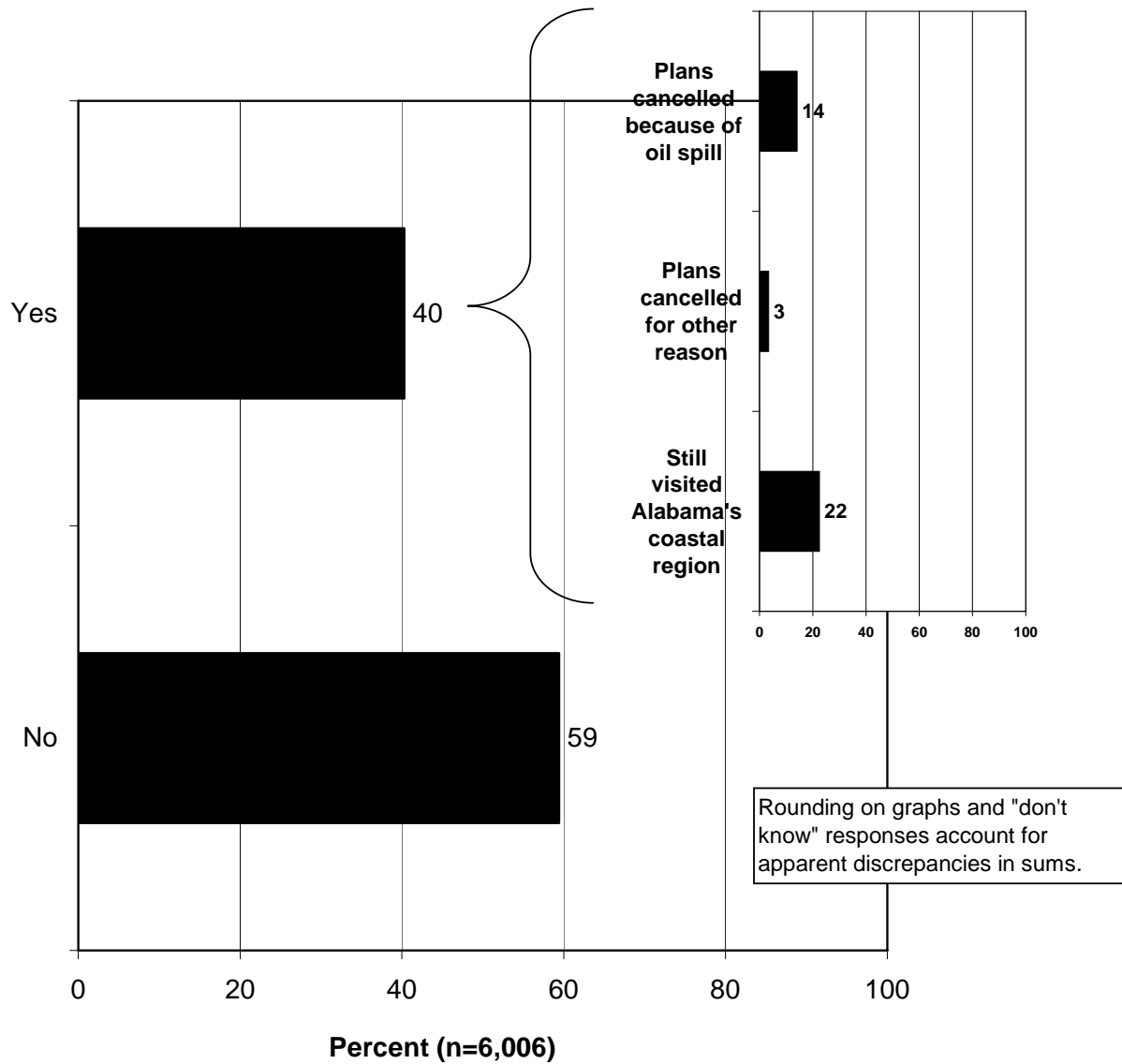


Figure 12. Plans to Visit Alabama’s Coastal Region and the Effects of the Oil Spill on Actual Visitation

Q63. Were your plans to visit or travel to Alabama's coastal region on or after April 20, 2010, canceled because of the oil spill in the Gulf of Mexico? (Asked of those who had planned to personally visit or travel to Alabama's coastal region on or after April 20, 2010; the percentage of total is shown.)

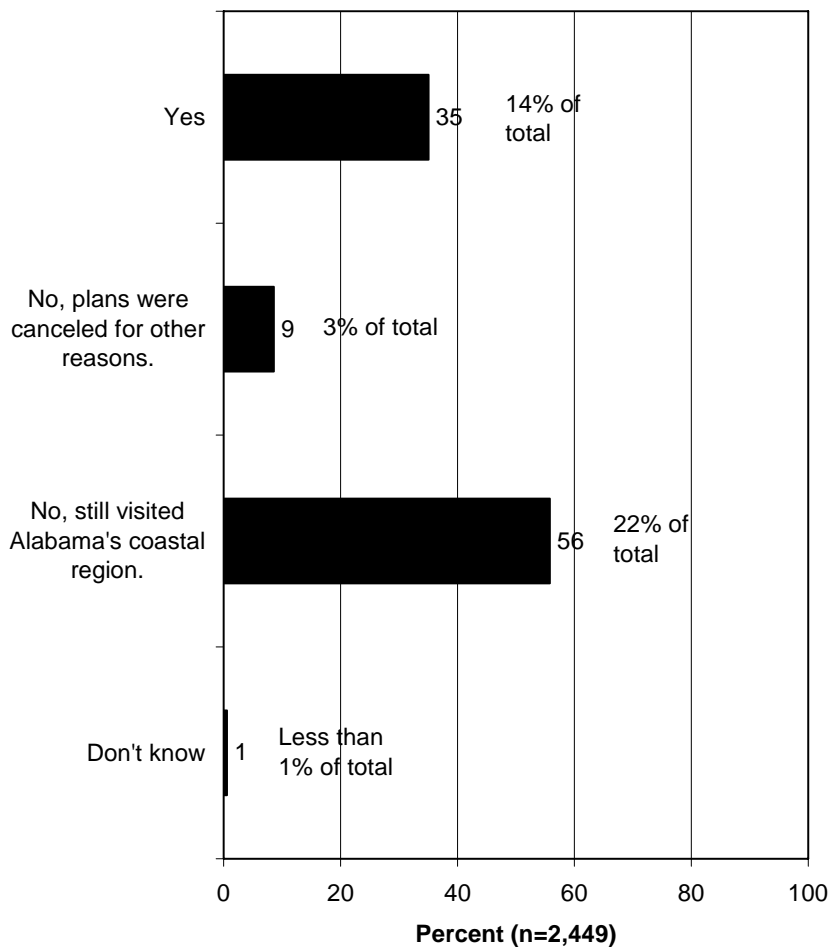


Figure 13. Effects of the Oil Spill on Planned Visits to Alabama's Coastal Region

Another question asked about planned fishing activities. Again, the 40% of people who had planned to visit Alabama's coastal region includes 12% who had planned to recreationally fish and 28% who had not planned to recreationally fish (Figure 14). When examining fishing plans among those who had planned to make a visit to Alabama's coastal region, the survey found that 30% of them had planned to fish, while 70% had not (Figure 15).

Q62. Prior to the oil spill in the Gulf of Mexico, did you plan to personally visit or travel to Alabama's coastal region on or after April 20, 2010?

IF SO:

Q64. Did you plan to personally go recreational fishing during your visit to Alabama's coastal region on or after April 20, 2010?

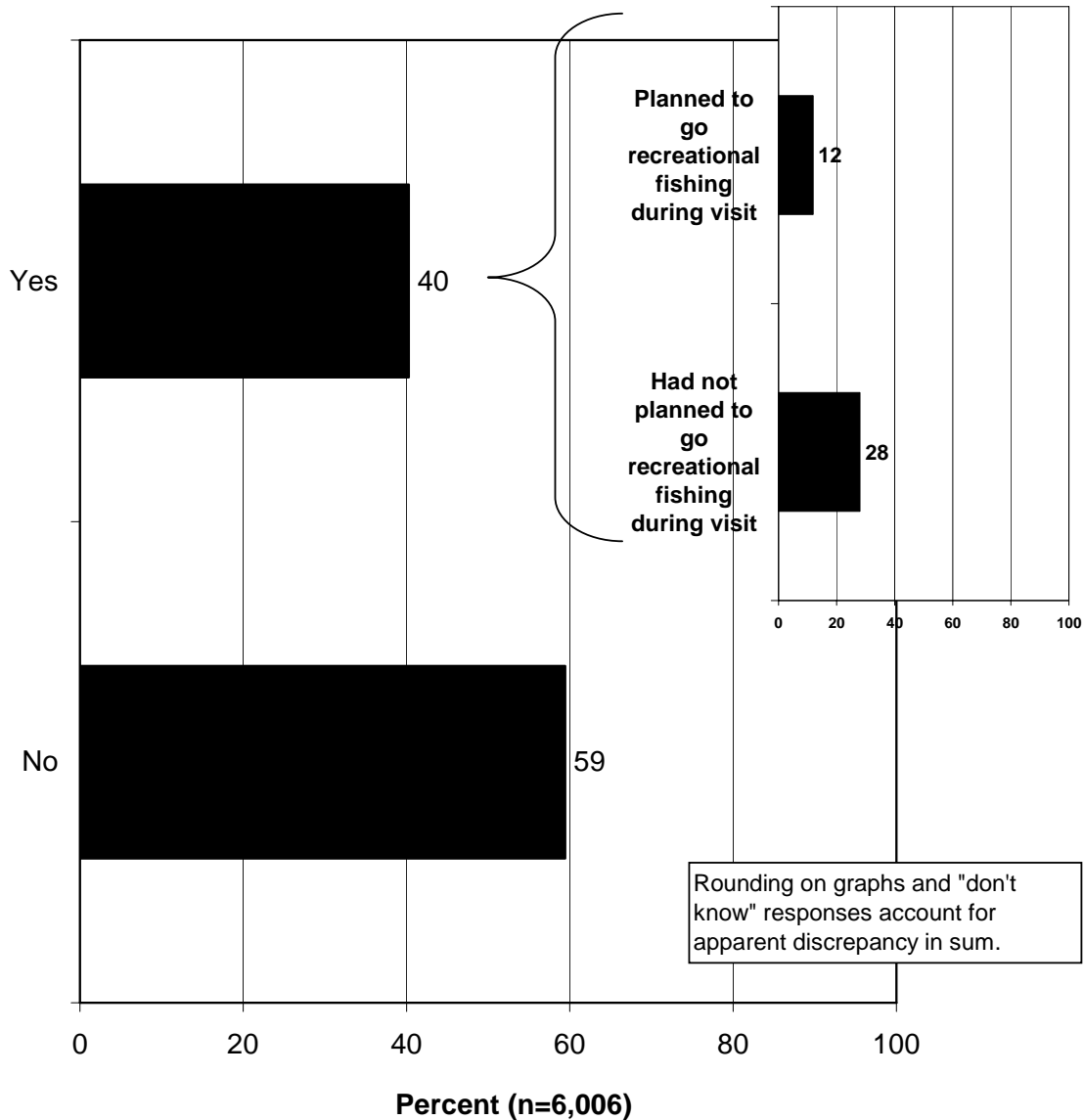


Figure 14. Plans to Visit Alabama’s Coastal Region and Plans to Fish During That Visit

Q64. Did you plan to personally go recreational fishing during your visit to Alabama's coastal region on or after April 20, 2010? (Asked of those who had planned to personally visit or travel to Alabama's coastal region on or after April 20, 2010.)

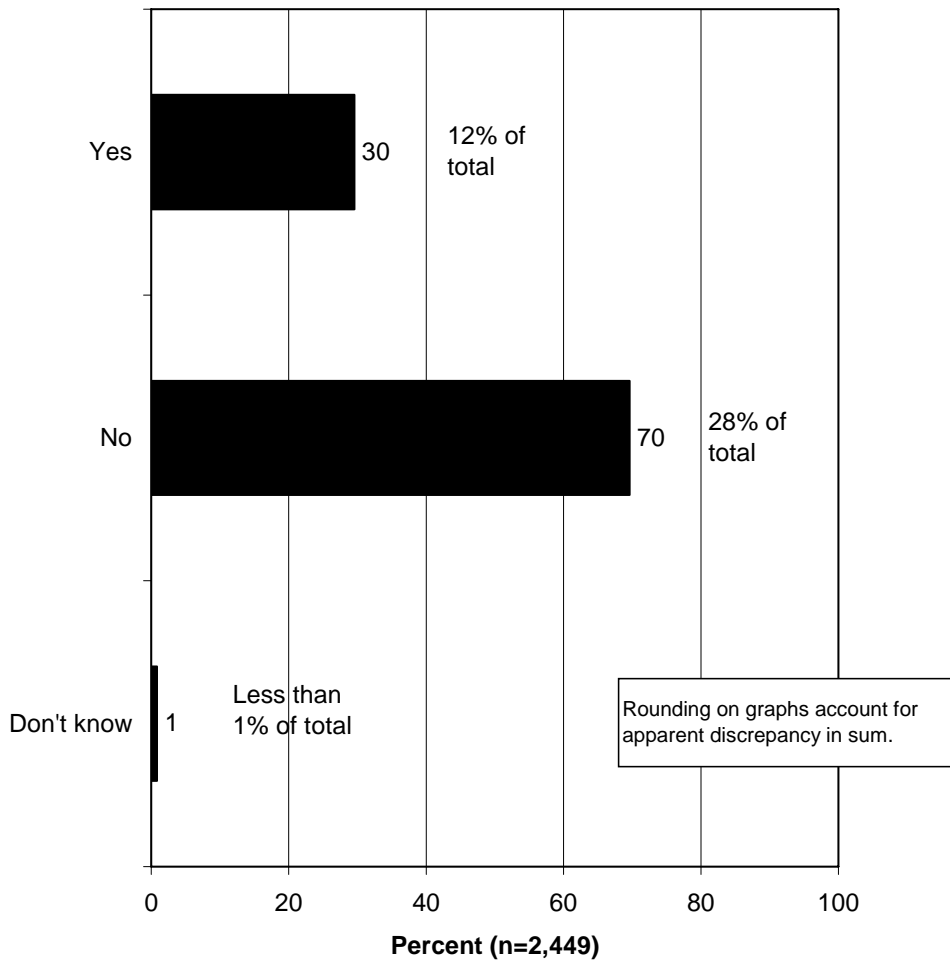


Figure 15. Plans to Recreationally Fish Among Those Who Planned to Visit Alabama's Coastal Region

The analysis included a calculation of the percent who *actually went* fishing during their visit among those who had *planned* to go fishing during their visit. Figure 16 shows the results of this analysis: 12% of those who planned to visit the coast *and* who planned to fish during that visit actually visited the coast and fished at that time.

Q68. Did you personally go [freshwater fishing / saltwater fishing / both] during your visit to Alabama's coastal region on or after April 20 of this past year? (Asked of those who planned to visit or travel to Alabama's coastal region on or after April 20, 2010, and who planned to personally go recreational fishing during this visit.)

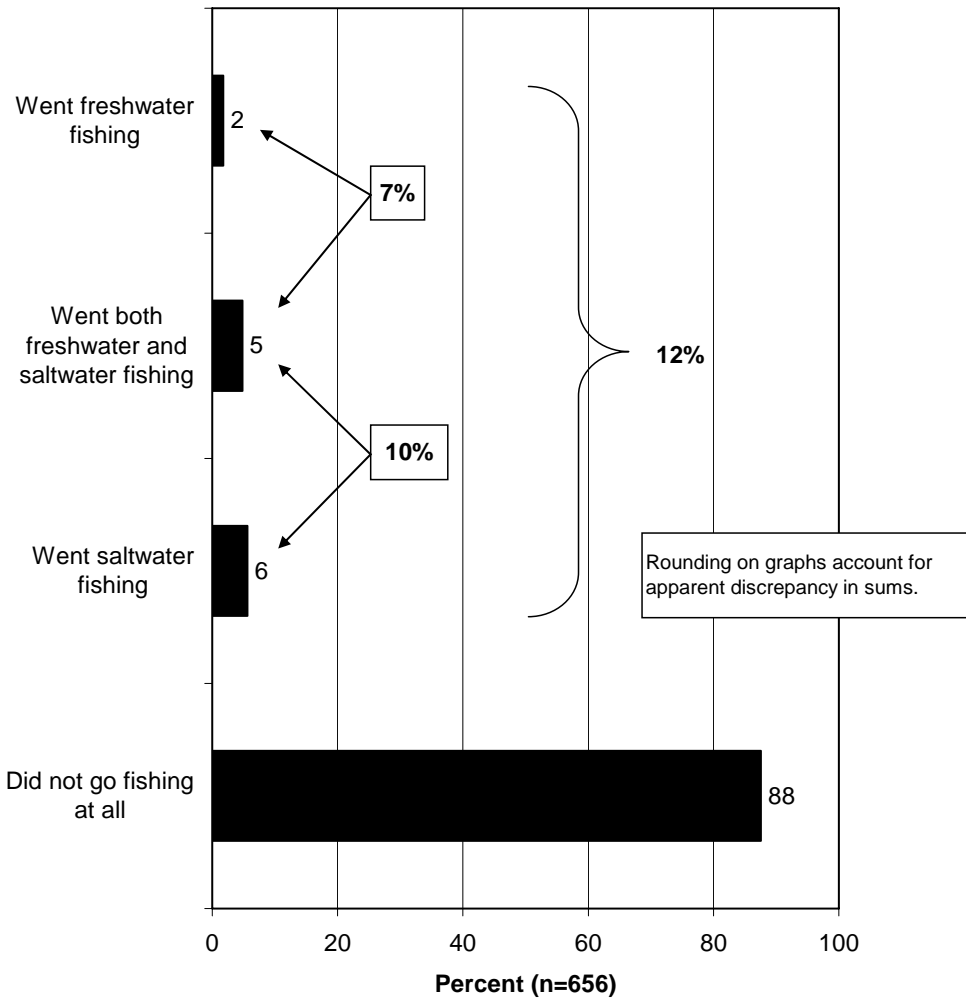


Figure 16. Percent Who Carried Out Plans to Fish on a Visit to Alabama’s Coastal Region After the Deepwater Horizon Oil Spill

Another analysis that combines data from several questions produces the matrix shown in Table 12. This matrix suggests that 16% of those who had planned to visit Alabama’s coastal region cancelled a fishing trip because of the oil spill (378 of the 2,241 respondents in Table 12 are in the cell representing yes to Q63 and yes to Q64). This, in turn represents approximately 6% of all Alabama residents.

Table 12. Matrix of Planned Coastal Visits and Planned Recreational Fishing

Among respondents who had planned to personally visit or travel to Alabama's coastal region on or after April 20, 2010.		Q64. Did you plan to personally go recreational fishing during your visit to Alabama's coastal region on or after April 20, 2010?			
		Yes	No	Don't know	Total
Q63. Were your plans to visit or travel to Alabama's coastal region on or after April 20, 2010, canceled because of the oil spill in the Gulf of Mexico?	Yes; plans were canceled because of the oil spill.	378*	456	15	849
	No, but plans were canceled for other reasons.	64	142	2	208
	No; still visited Alabama's coastal region.	267	1,080	3	1,350
	Don't know	7	7	0	14
	Total	716	1,685	20	2,421

*This is 15.6% of those who had planned to visit the coastal region; it is 6.3% of all respondents (6,006).

It is worth noting that the breakdown of planned fishing activities, among those who had planned to go fishing on a visit to the Alabama coastal region on or after April 20, 2010, was as follows: 57% had planned to saltwater fish only, 7% had planned to freshwater fish only, and 37% had planned to fish in both freshwater and saltwater during their visit (Figure 17).

Q65. Did you plan to go freshwater fishing, saltwater fishing, or both? (Asked of those who had planned to personally go recreational fishing during their visit to Alabama's coastal region on or after April 20, 2010.)

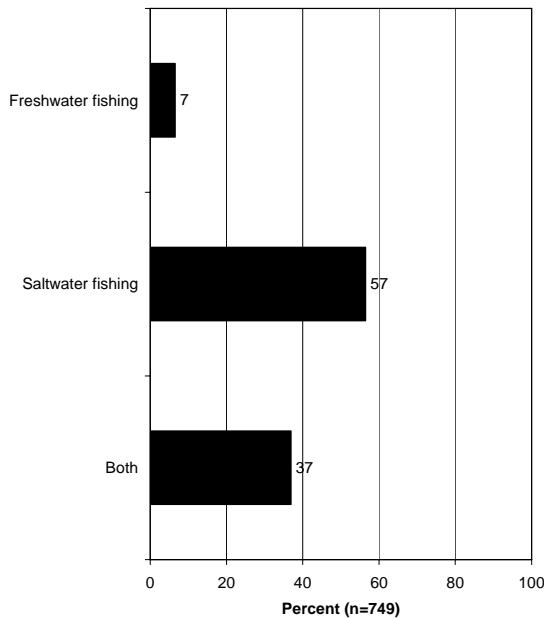


Figure 17. Types of Planned Fishing During Trips to Alabama's Coastal Region

A few questions within the series of six questions about possible constraints (discussed previously) pertained directly to the Deepwater Horizon oil spill and water pollution. In the first of these questions, the survey asked anglers if the oil spill influenced them to fish less or not to fish at all. The large majority of respondents (75%) were *not* influenced by the oil spill; conversely, 25% were influenced, broken down as 16% *strongly* influenced and 9% *moderately* influenced (Figure 18).

Q59. What about the recent oil spill in the Gulf of Mexico? (Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

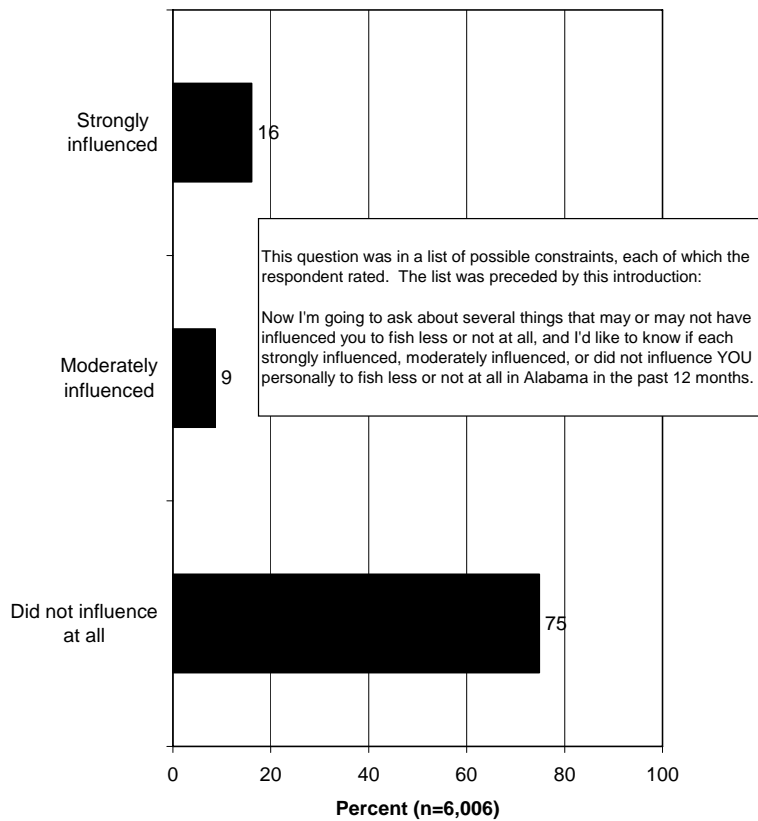


Figure 18. Deepwater Horizon Oil Spill as a Constraint to Fishing Participation

Two more questions were asked that could pertain to the oil spill, although the wording did not include “oil spill”: concern about fish contamination as a constraint, and water pollution as a constraint. Both had similar results, with the large majority saying that these items did not influence them (Figures 19 and 20). Otherwise, for each, about a quarter were influenced to fish less or to not fish at all.

Q58. What about concern about fish contamination? (Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

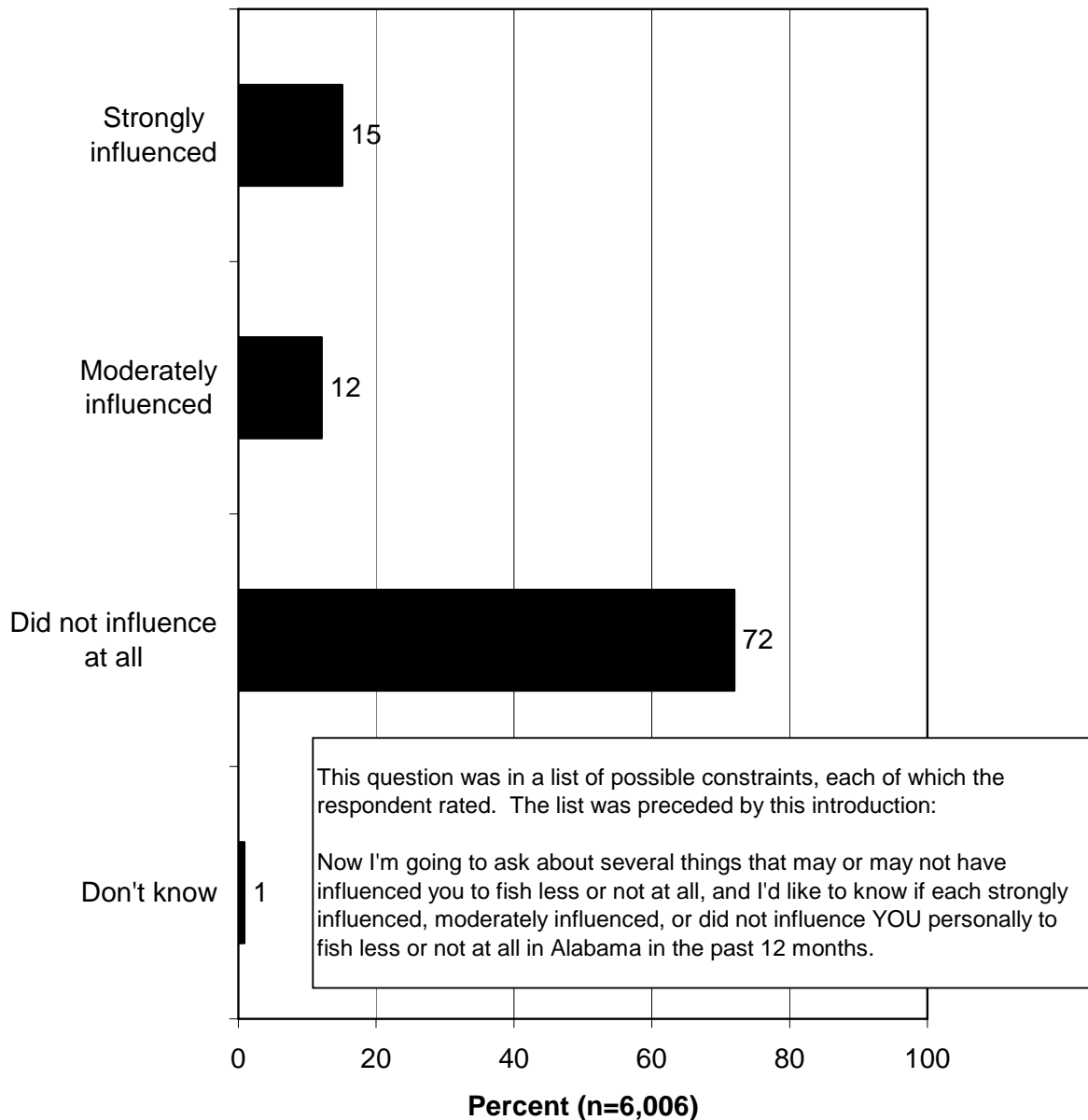


Figure 19. Fish Contamination as a Constraint to Fishing Participation

Q57. What about the quality of water or water pollution? (Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

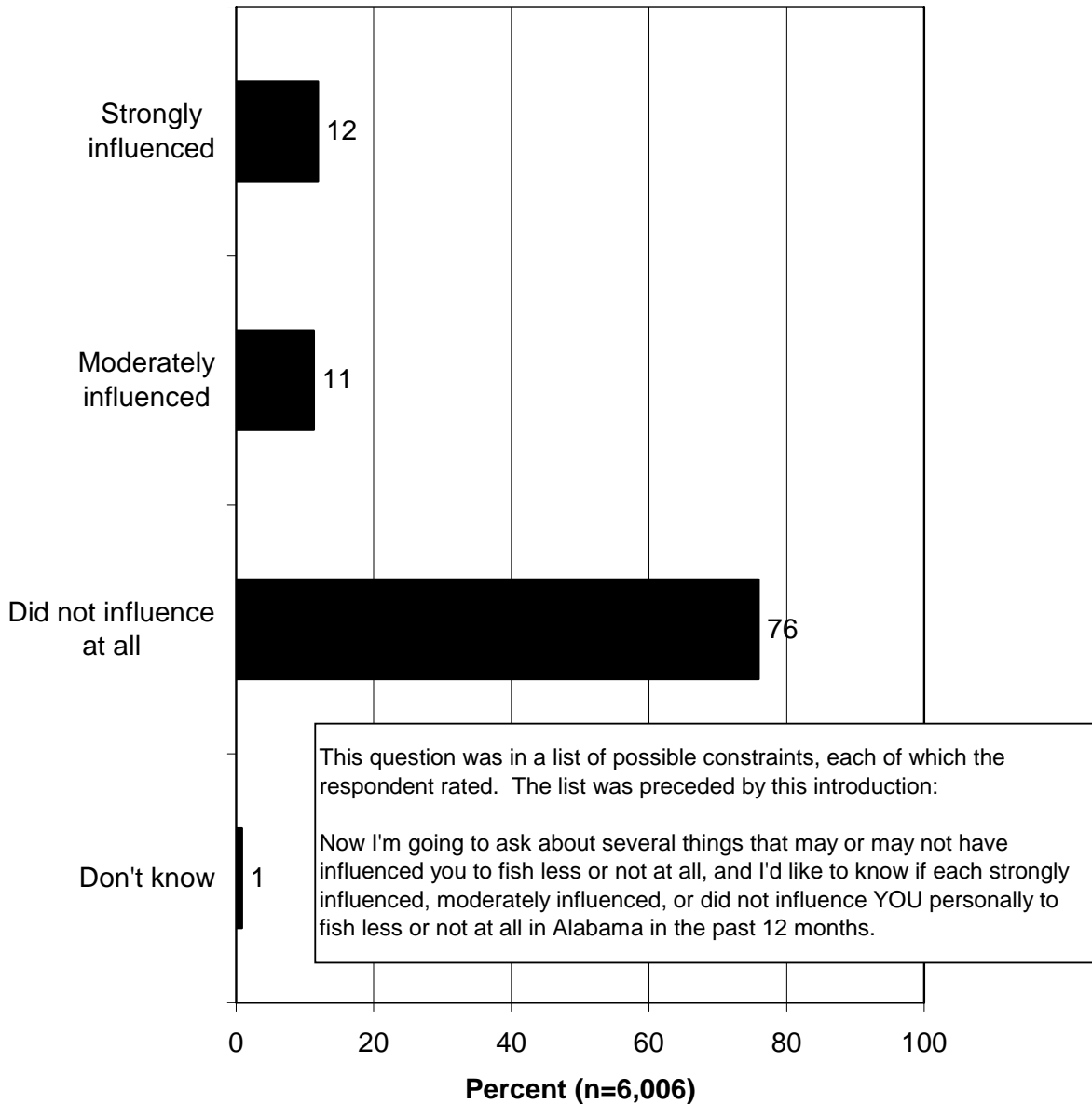


Figure 20. Water Pollution as a Constraint to Fishing Participation

DEMOGRAPHIC DATA

Gender and age breakdowns of respondents are shown.

Q77. Respondent's gender (observed, not asked, by interviewer).

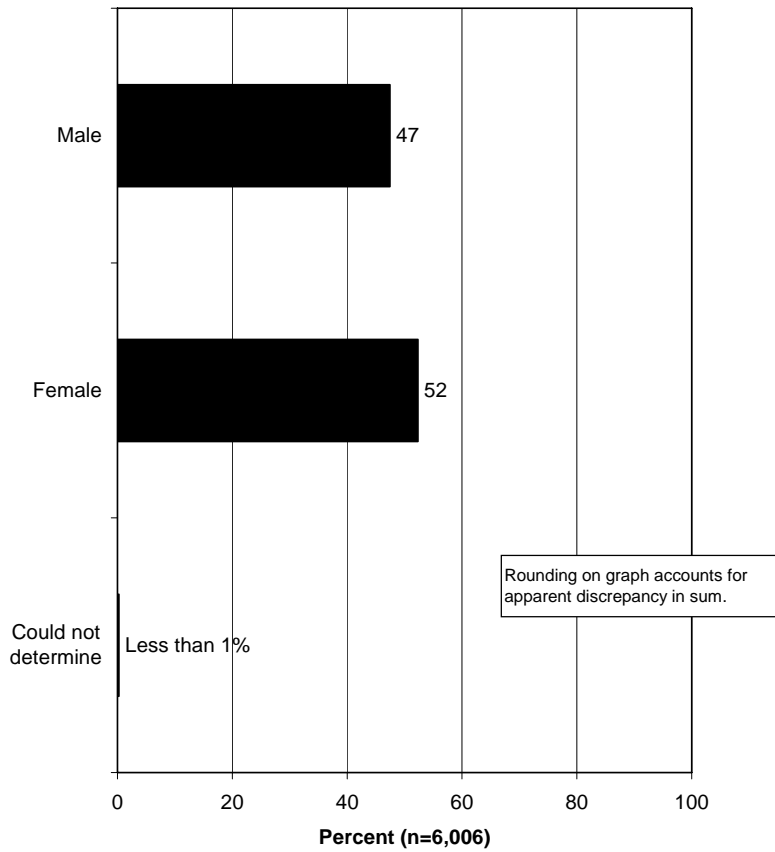


Figure 21. Gender of Respondents

Q71. Respondent's age.

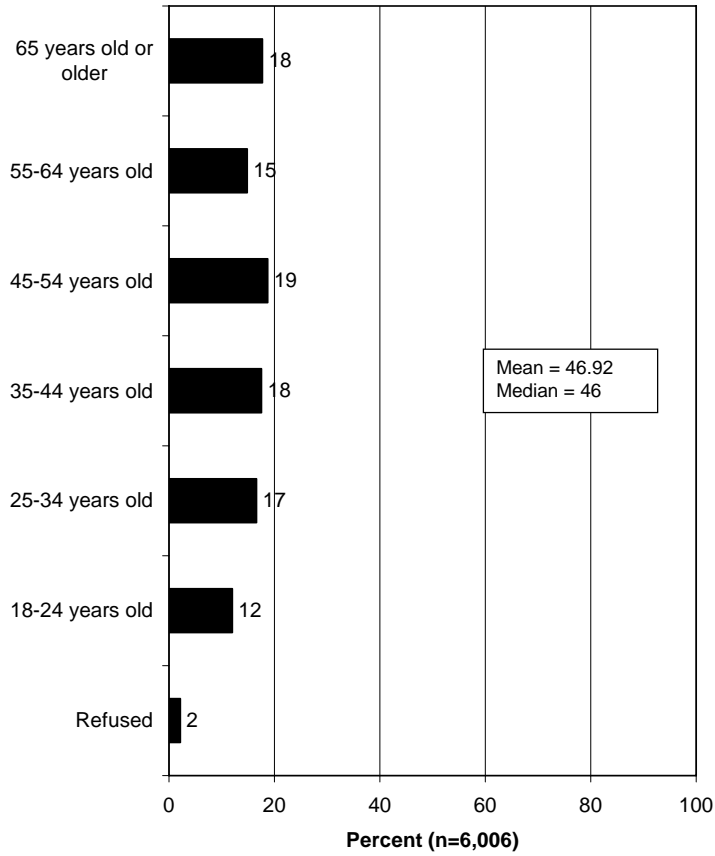


Figure 22. Age of Respondents

APPENDIX A: SURVEY QUESTIONNAIRE

The survey questionnaire is included below. The screener questions, logic statements, calculation statements, error handlers, and skip control statements (all of which are numbered along with questions) have been removed for readability. Because some statements are removed, the numbers of questions are not consecutive (although they are sequential). In some questions, the Questionnaire Programming Language software automatically inserts wording from the choices shown in braces [] depending on previous answers. Explanatory statements for the reader's understanding of the survey are in brackets { }.

Alabama Fishing Participation Survey

Q4. Hello, my name is _____, and I am calling on behalf of the Alabama Department of Conservation and Natural Resources to ask just a few questions about outdoor recreation in Alabama. Do you have a few minutes to answer some questions about outdoor recreation?

Q7. Are you at least 18 years old? {IF NOT, OUT OF SURVEY}

Q10. Is the state of Alabama your permanent year-round residence? {IF NOT, OUT OF SURVEY}

Q14. Next, I have a few questions about whether those living in your household have been fishing in Alabama and the type of fishing they did. You do not need to have ever gone fishing to answer these questions. My first question is for background information.

Q15. Including yourself, how many people age 6 or older who are permanent residents of Alabama live in your household?

Q17. Thank you. My next questions are about recreational fishing in Alabama only. Some people fish in freshwater, such as rivers, streams, lakes, and ponds, and some fish in saltwater, such as in the ocean, the Gulf of Mexico, Mobile Bay, or other bays and inlets. When I say fishing in Alabama, I mean fishing from a bank, the shore, a bridge, a dock, or a pier in Alabama. If anyone was fishing from a boat, fishing must have taken place in Alabama waters or in adjacent federal waters.

Q18. Have you or has anyone living in your household who is age 6 or older and a permanent resident of Alabama gone recreational fishing, either freshwater or saltwater fishing, in Alabama in the past 12 months?

Q19. You said that, including yourself, you have [AMOUNT GIVEN IN QUESTION #15] who are age 6 or older and are permanent residents of Alabama living in your household. My next few questions are ONLY about those who are age 6 or older and are permanent residents of Alabama living in your household. My questions are also about recreational fishing only.

Q21. In the past 12 months, how many people in your household, age 6 or older who are residents of Alabama, including yourself, have gone freshwater fishing in Alabama?

Q25. In the past 12 months, have you, personally, gone freshwater fishing in Alabama?

Q26. In the past 12 months, how many people in your household, age 6 or older who are residents of Alabama, including yourself, have gone saltwater fishing in Alabama?

Q30. In the past 12 months, have you, personally, gone saltwater fishing in Alabama?

Q34. You said that you have [AMOUNT GIVEN IN QUESTION #15] who are 6 years old and older and are permanent residents of Alabama living in your household, but not everyone went [freshwater/saltwater/either freshwater or saltwater] fishing in the past 12 months.

{ ASKED OF THOSE WHO HAD AT LEAST ONE PERSON IN HOUSEHOLD WHO DID NOT PARTICIPATE IN THE SPECIFIED TYPE OF FISHING OR DID NOT FISH IN GENERAL }

Q39/Q42. Not including yourself this time, why didn't [anyone else/those who didn't fish], age 6 years old and older and residents of Alabama, go [fishing/freshwater fishing/saltwater fishing] in Alabama in the past 12 months?

{ ASKED OF THOSE WHO DID NOT PERSONALLY PARTICIPATE IN THE SPECIFIED TYPE OF FISHING OR DID NOT FISH IN GENERAL }

Q47/Q50. Why didn't you personally go [fishing/freshwater fishing/saltwater fishing] in Alabama in the past 12 months?

=====
=====

Q52. Now I'm going to ask about several things that may or may not have influenced you to fish less or not at all, and I'd like to know if each strongly influenced, moderately influenced, or did not influence YOU personally to fish less or not at all in Alabama in the past 12 months.

{ NOTE THAT THE STARTING POINT WAS RANDOMIZED SO THAT THE ORDER OF THE QUESTIONS IN THIS LIST WAS NOT THE SAME FOR ALL RESPONDENTS }

Q54. What about not enough time?
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

Q55. What about because you feel you lack skills or expertise?
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

Q56. What about you have to travel too far?
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

Q57. What about the quality of water or water pollution?
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

Q58. What about concern about fish contamination?
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

Q59. What about the recent oil spill in the Gulf of Mexico
(Did this strongly influence, moderately influence, or not influence you personally to fish less or not at all in Alabama in the past 12 months?)

=====
=====

Q60. Prior to this survey, were you aware of the oil spill that occurred in the Gulf of Mexico, sometimes referred to as the BP oil spill, in April 2010?

Q61. On April 20, 2010, a drilling rig explosion in the Gulf of Mexico started an oil leak from the sea floor that lasted about 3 months.

=====

Q62. Prior to the oil spill in the Gulf of Mexico, had you planned to personally visit or travel to Alabama's coastal region on or after April 20, 2010?

{ ASKED OF THOSE WHO HAD PLANNED TO VISIT OR TRAVEL TO ALABAMA'S COASTAL REGION ON OR AFTER APRIL 20, 2010 }

Q63. Were your plans to visit or travel to Alabama's coastal region on or after April 20, 2010, canceled because of the oil spill in the Gulf of Mexico?

Q64. Had you planned to personally go recreational fishing during your visit to Alabama's coastal region on or after April 20, 2010?

{ ASKED OF THOSE WHO HAD PLANNED TO FISH ON THEIR VISIT TO ALABAMA'S COASTAL REGION }

Q65. Had you planned to go freshwater fishing, saltwater fishing, or both? (During your visit to Alabama's coastal region on or after April 20, 2010.)

Q68. Did you personally go [freshwater fishing, saltwater fishing, or both/freshwater fishing/saltwater fishing] during your visit to Alabama's coastal region on or after April 20, 2010 of this year?

=====

Q69. Great, we're just about through. The final questions are for background information and help us analyze the results.

Q70. What county do you live in?

Q71. May I ask your age?

Q75. That's the end of the survey. Thanks for your time and cooperation.

Q77. OBSERVE AND RECORD RESPONDENT'S GENDER.

APPENDIX B: COUNTY-BY-COUNTY SAMPLING AND PARTICIPATION

The tables below show the weighted values. In the sampling plan, the two southernmost counties, Mobile and Baldwin, were purposely oversampled and then weighted down to their correct proportions. Weighting by gender and age also was done to accurately represent Alabama residents as a whole.

Appendix B, Table 1. County Fishing Participation, By Individual Analysis Method

County	Fished in Alabama in the past 12 months		Did not fish in Alabama in the past 12 months		Total, by county
	Number	Percent of county	Number	Percent of county	
Autauga	13	21.3	48	78.7	61
Baldwin	88	38.9	138	61.1	226
Barbour	21	30.9	47	69.1	68
Bibb	10	52.6	9	47.4	19
Blount	37	56.1	29	43.9	66
Bullock	12	54.5	10	45.5	22
Butler	6	40.0	9	60.0	15
Calhoun	51	35.2	94	64.8	145
Chambers	13	28.9	32	71.1	45
Cherokee	9	42.9	12	57.1	21
Chilton	26	40.0	39	60.0	65
Choctaw	6	40.0	9	60.0	15
Clarke	8	50.0	8	50.0	16
Clay	2	11.8	15	88.2	17
Cleburne	5	33.3	10	66.7	15
Coffee	20	33.9	39	66.1	59
Colbert	43	37.7	71	62.3	114
Conecuh	4	25.0	12	75.0	16
Coosa	9	56.3	7	43.8	16
Covington	16	34.0	31	66.0	47
Crenshaw	3	27.3	8	72.7	11
Cullman	57	52.8	51	47.2	108
Dale	20	34.5	38	65.5	58
Dallas	23	22.3	80	77.7	103
DeKalb	45	47.9	49	52.1	94
Elmore	58	47.5	64	52.5	122
Escambia	22	37.9	36	62.1	58
Etowah	48	33.1	97	66.9	145
Fayette	10	38.5	16	61.5	26
Franklin	15	31.9	32	68.1	47
Geneva	11	47.8	12	52.2	23
Greene	8	50.0	8	50.0	16
Hale	5	29.4	12	70.6	17
Henry	11	47.8	12	52.2	23
Houston	50	38.2	81	61.8	131

Appendix B, Table 1 (continued). County Fishing Participation, By Individual Analysis Method

County	Fished in Alabama in the past 12 months		Did not fish in Alabama in the past 12 months		Total, by county
	Number	Percent of county	Number	Percent of county	
Jackson	22	30.6	50	69.4	72
Jefferson	236	27.7	616	72.3	852
Lamar	2	13.3	13	86.7	15
Lauderdale	54	37.8	89	62.2	143
Lawrence	39	65.0	21	35.0	60
Lee	48	32.7	99	67.3	147
Limestone	27	26.5	75	73.5	102
Lowndes	8	42.1	11	57.9	19
Macon	2	6.5	29	93.5	31
Madison	92	25.6	268	74.4	360
Marengo	1	7.1	13	92.9	14
Marion	9	36.0	16	64.0	25
Marshall	45	42.9	60	57.1	105
Mobile	171	33.5	340	66.5	511
Monroe	7	41.2	10	58.8	17
Montgomery	74	25.3	219	74.7	293
Morgan	43	28.3	109	71.7	152
Perry	4	21.1	15	78.9	19
Pickens	5	33.3	10	66.7	15
Pike	9	37.5	15	62.5	24
Randolph	2	10.5	17	89.5	19
Russell	26	36.1	46	63.9	72
St. Clair	37	37.0	63	63.0	100
Shelby	60	29.6	143	70.4	203
Sumter	13	76.5	4	23.5	17
Talladega	36	31.6	78	68.4	114
Tallapoosa	19	33.3	38	66.7	57
Tuscaloosa	80	34.2	154	65.8	234
Walker	52	43.0	69	57.0	121
Washington	8	53.3	7	46.7	15
Wilcox	3	30.0	7	70.0	10
Winston	3	17.6	14	82.4	17
Don't know	0	0.0	2	100.0	2

Appendix B, Table 2. County Fishing Participation, By Household Analysis Method

County	Fished in Alabama in the past 12 months		Did not fish in Alabama in the past 12 months		Total, by county
	Number	Percent of county	Number	Percent of county	
Autauga	38	24.5	117	75.5	155
Baldwin	224	38.2	363	61.8	587
Barbour	53	30.8	119	69.2	172
Bibb	20	26.0	57	74.0	77
Blount	105	57.1	79	42.9	184
Bullock	27	56.3	21	43.8	48
Butler	9	28.1	23	71.9	32
Calhoun	132	35.7	238	64.3	370
Chambers	44	37.0	75	63.0	119
Cherokee	18	40.9	26	59.1	44
Chilton	60	30.9	134	69.1	194
Choctaw	22	53.7	19	46.3	41
Clarke	20	45.5	24	54.5	44
Clay	5	10.9	41	89.1	46
Cleburne	11	28.2	28	71.8	39
Coffee	41	29.9	96	70.1	137
Colbert	84	24.4	260	75.6	344
Conecuh	8	15.4	44	84.6	52
Coosa	40	67.8	19	32.2	59
Covington	55	45.5	66	54.5	121
Crenshaw	8	28.6	20	71.4	28
Cullman	127	42.5	172	57.5	299
Dale	62	41.1	89	58.9	151
Dallas	61	24.2	191	75.8	252
DeKalb	109	39.4	168	60.6	277
Elmore	164	45.1	200	54.9	364
Escambia	71	45.5	85	54.5	156
Etowah	140	38.8	221	61.2	361
Fayette	18	24.0	57	76.0	75
Franklin	36	25.7	104	74.3	140
Geneva	26	46.4	30	53.6	56
Greene	15	39.5	23	60.5	38
Hale	11	22.9	37	77.1	48
Henry	26	42.6	35	57.4	61
Houston	126	37.0	215	63.0	341

Appendix B, Table 2 (continued). County Fishing Participation, By Household Analysis Method

County	Fished in Alabama in the past 12 months		Did not fish in Alabama in the past 12 months		Total, by county
	Number	Percent of county	Number	Percent of county	
Jackson	76	38.2	123	61.8	199
Jefferson	676	28.5	1692	71.5	2368
Lamar	7	17.5	33	82.5	40
Lauderdale	133	34.7	250	65.3	383
Lawrence	90	53.6	78	46.4	168
Lee	138	36.5	240	63.5	378
Limestone	87	29.4	209	70.6	296
Lowndes	36	63.2	21	36.8	57
Macon	6	9.5	57	90.5	63
Madison	278	27.8	723	72.2	1001
Marengo	3	9.7	28	90.3	31
Marion	34	48.6	36	51.4	70
Marshall	119	44.1	151	55.9	270
Mobile	497	35.0	923	65.0	1420
Monroe	16	39.0	25	61.0	41
Montgomery	193	27.0	523	73.0	716
Morgan	127	29.3	306	70.7	433
Perry	5	11.1	40	88.9	45
Pickens	19	35.2	35	64.8	54
Pike	27	44.3	34	55.7	61
Randolph	10	11.6	76	88.4	86
Russell	62	27.8	161	72.2	223
St. Clair	123	35.5	223	64.5	346
Shelby	148	26.7	407	73.3	555
Sumter	45	81.8	10	18.2	55
Talladega	112	37.7	185	62.3	297
Tallapoosa	41	33.9	80	66.1	121
Tuscaloosa	197	30.8	442	69.2	639
Walker	146	40.1	218	59.9	364
Washington	33	62.3	20	37.7	53
Wilcox	5	17.9	23	82.1	28
Winston	13	31.0	29	69.0	42
Don't know	0	0.0	4	100.0	4

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Its mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing its in-house, full-service, computer-assisted telephone and mail survey center with 45 professional interviewers, Responsive Management has conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communications plans, need assessments, and program evaluations on natural resource and outdoor recreation issues.

Clients include most of the federal and state natural resource, outdoor recreation, and environmental agencies, and most of the top conservation organizations. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn, Texas Tech, the University of California—Davis, Michigan State University, the University of Florida, North Carolina State University, Penn State, West Virginia University, and others.

Among the wide range of work Responsive Management has completed during the past 20 years are studies on how the general population values natural resources and outdoor recreation, and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of selected groups of outdoor recreationists, including anglers, boaters, hunters, wildlife watchers, birdwatchers, park visitors, historic site visitors, hikers, and campers, as well as selected groups within the general population, such as landowners, farmers, urban and rural residents, women, senior citizens, children, Hispanics, Asians, and African-Americans. Responsive Management has conducted studies on environmental education, endangered species, waterfowl, wetlands, water quality, and the reintroduction of numerous species such as wolves, grizzly bears, the California condor, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their memberships and donations. Responsive Management has conducted major agency and organizational program needs assessments and helped develop more effective programs based upon a solid foundation of fact. Responsive Management has developed websites for natural resource organizations, conducted training workshops on the human dimensions of natural resources, and presented numerous studies each year in presentations and as keynote speakers at major natural resource, outdoor recreation, conservation, and environmental conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts

surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management's research has been featured in most of the nation's major media, including CNN, ESPN, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front pages of *The Washington Post* and *USA Today*.

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