

# Responsive Management



## **ARIZONA RESIDENTS' KNOWLEDGE OF AND ATTITUDES TOWARD OFF-HIGHWAY VEHICLE USE IN ARIZONA**

**Conducted for the  
Arizona Game and Fish Department**

**Responsive Management  
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## **EXECUTIVE SUMMARY**

This study was conducted on behalf of the Arizona Game and Fish Department to obtain information regarding Arizona residents' knowledge of and attitudes toward off-highway vehicle use in Arizona. The primary objectives of this study were to determine residents' knowledge and perception of off-highway vehicle use in Arizona and to measure participant satisfaction with off-highway vehicle activities and regulations.

Before this survey, over two-thirds (67%) of Arizona residents were unaware that the Arizona Game and Fish Department managed and regulated off-highway vehicle activities. The majority (52%) of Arizona residents had heard a little about off-highway vehicle activities in Arizona over the past two years. Despite a majority of residents who had heard about off-highway vehicle activities over the last two years, three-quarters of Arizona residents were uninformed about the laws and regulations concerning off-highway and off-road use in Arizona.

A majority (79%) of Arizona residents had not personally participated in any type of off-highway vehicle activities in Arizona within the past two years. Most (72%) of those who had not participated in an off-highway vehicle activity showed no interest in participating in any type of off-highway vehicle activity. A large majority (88%) of Arizona residents who had participated in off-highway vehicle activities over the last two years were satisfied with their off-highway vehicle experience.

Of Arizona residents who had participated in off-highway vehicle use, 45% were satisfied with the current off-highway vehicle regulations in Arizona. Just over a third of off-highway vehicle participants felt that over the last five years off-highway vehicle access declined with an additional third that felt that off-highway vehicle access had remained about the same over the last five years.

Over two-thirds (67%) of Arizona residents agreed that a lot of off-highway vehicle participants violate off-highway vehicle laws. A majority of Arizona residents supported all three of the proposed additions to regulations of off-highway vehicle use: a mandatory operator's license, a minimum legal age to operate an off-highway vehicle and a mandatory registration fee for off-highway vehicles.

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## **INTRODUCTION AND METHODOLOGY**

This study was conducted on behalf of the Arizona Game and Fish Department to obtain information regarding Arizona residents' knowledge of and attitudes toward off-highway vehicle (OHV) use in Arizona. The primary objectives of this study were to determine residents' knowledge and perception of off-highway vehicle use in Arizona, to measure participants' satisfaction with off-highway vehicle activities and regulations, and to determine relevant off-highway vehicle information topics and avenues of dissemination for this information.

The survey questionnaire was developed cooperatively between the Arizona Game and Fish Department (AGFD) and Responsive Management (RM). The survey instrument was administered by telephone to Arizona residents 18 years of age and older. The statewide Arizona sample was purchased from Survey Sampling, Inc. of Fairfield, Connecticut.

Telephones were the preferred medium to conduct this survey since nearly all potential respondents had access to a phone. A central telephone-polling site at Responsive Management allowed for rigorous quality control over interviewers and data collection. These facilities were staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of natural resources and outdoor recreation for state fish and wildlife agencies and natural resource organizations. In addition, interviewers were trained according to standards established by the Council of American Survey Research Organizations. Professional staff randomly monitored interviewers to evaluate each interviewer's performance.

Professional staff members conducted project briefings with each interviewer prior to his or her beginning work on this project. Interviewers were briefed and instructed on study goals and objectives, type of study, handling of survey questions, interview length, termination points, qualifiers for participation, reading of interviewer instructions, reading of survey, skip patterns,

and probing and clarifying techniques necessary for specific questions on the survey instrument. Professional staff edited each survey to check for clarity, understanding, completeness, and form.

Interviews were conducted Monday through Friday from 5:00 p.m. to 11:00 p.m. and on Saturday from 12:00 p.m. to 6:00 p.m. Eastern Standard Time. A multiple callback design was used to maintain the representativeness of the sample, avoid bias toward people easy to reach by telephone, and provide an equal opportunity for all to participate. Subsequent calls were placed at different times of the day and on different days of the week.

The software used for data collection was Questionnaire Programming Language (QPL) version 4.1 (National Technical Information Services, 1999). QPL is a comprehensive system for computer-assisted telephone interviewing. The survey data was entered into the computer as the interviews were conducted, eliminating possible errors associated with manual data entry after the completion of the interviews. The survey instrument was programmed so that QPL branched, coded, and substituted phrases in the survey based upon previous responses to ensure the integrity and consistency of data collection.

## **RESULTS**

Fieldwork for the survey was conducted from January 31, 2001 to February 10, 2001. A total of 1,008 Arizona residents were interviewed. Throughout the survey, “participants” are defined as those residents that reported participating in off-highway vehicle activities in Arizona within the past two years. “Non-participants” are defined as those residents that had not participated in off-highway vehicle activities in Arizona within the past two years. Off-highway vehicle participants were asked a series of questions pertaining to the off-highway vehicle activities they had participated in over the last two years, as well as being the general overview questions about off-highway vehicle use.

### **Response Rate and Sampling Error**

Attempts were made to contact 3,569 randomly selected Arizona residents which resulted in 1,025 disconnected or non-working numbers with no new number available, 90 language barrier problems, 304 hard refusals, 68 ineligible interviews, 473 government or business contacts, 20 terminated interviews, 581 soft refusals (“call back at a different time,” unavailable for the duration of the survey, no answer/answering machine, or busy signal) and 1,008 completed surveys. Thus, the response rate for this survey was 52.7%.

Throughout this report, most findings are reported at a 95% confidence interval. For the entire sample of Arizona residents the sampling error is at most plus or minus 3.09 percent. This means that if the survey was administered 100 times, to different samples that were selected in the same fashion, 95 of the 100 surveys’ findings would fall within plus or minus 3.09 percent of each other. Sampling error was calculated using the formula described below, a sample size of 1008, and a population size of 3,162,883. The population size is for all residents of Arizona 18

years of age or older (the same age criterion used for the current study). Population data was gathered from the United States Census web site (<http://factfinder.census.gov/>).

Some results reported may not add to exactly 100% due to rounding and/or the fact that some questions allowed for multiple responses.

$$B = \sqrt{\frac{\frac{N_p(.25)}{N_s} - .25}{N_p - 1}} (1.96)$$

Where: B = maximum sampling error (as decimal)  
 $N_p$  = population size (e.g. total pop. of state)  
 $N_s$  = sample size

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

For example, if the population size of Wyoming is 481,000 and the sample size is 603, the sampling error is 3.988%.

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

### Off-Highway Vehicle Terminology

Respondents were asked what they think of when they hear the terms “off-highway vehicle” and “off-highway vehicle activities.” Asking respondents what they think of when they hear the terms “off-road vehicle” and “off-road vehicle activities” followed this question. Both questions allowed for multiple responses. Little to no variation existed between these two terms.

Respondents gave nearly identical answers to the use of both off-highway and off-road vehicle. In the minds of Arizona residents, “off-highway” and “off-road” are synonymous.

When asked what they think of when they hear the terms “off-highway vehicle” and “off-highway vehicle activities,” the majority (57%) of Arizona residents thought of driving an ATV, such as a 4-wheeler, off-road. The percentage of residents who identified some other definition for “off-highway vehicle” or “off-highway vehicle activities” quickly dropped to 14% who did not know what these terms meant. Nine percent thought of driving a REGISTERED VEHICLE off-road, 8% thought of driving completely off roads or on trails and 8% thought of a generic “negative” response such as destroying the environment. Six percent of residents gave each of the following responses: driving on an un-maintained road and driving on a trail. Various other responses were given, all under the fifth percentile.

Nearly identical responses were found when respondents were asked about what they think of when they hear the terms “off-road vehicle” and “off-road vehicle activities.” The majority (54%) once again responded, “driving an ATV, such as a 4-wheeler, off-road.” The percentage of residents who identified some other definition for “off-road vehicle” or “off-road vehicle activities” quickly dropped to 12% who did not know what these terms meant. Eleven percent thought of driving a REGISTERED VEHICLE off-road, and 10% thought of driving completely off roads or trails. Eight percent of residents gave each of the following responses: driving on an un-maintained road and driving on a trail. Seven percent thought of a generic “negative” response such as destroying the environment.

### **Knowledge about Off-Highway Vehicle Use**

The majority (52%) of Arizona residents have heard a little about off-highway vehicle activities in Arizona over the past two years as defined by driving off of maintained roads for

recreation or to gain access to places maintained roads do not go. While a majority of Arizona residents had heard a little about off-highway vehicle activities in Arizona over the past two years only 19% had heard a lot. Under a third (29%) had heard nothing at all about off-highway vehicle activities over the past two years. Despite a majority of residents who had heard about off-highway vehicle activities over the last two years, three-quarters of Arizona residents were either moderately (27%) or very (48%) *uninformed* about the laws and regulations concerning off-highway and off-road use in Arizona. Only 22% said they were either moderately (14%) or very (8%) *informed* about the laws and regulations concerning off-highway and off-road use in Arizona.

### **Participation in Off-Highway Vehicle Activities**

A majority (79%) of Arizona residents had not personally participated in any type of off-highway vehicle activities in Arizona within the past two years. Twenty-one percent of Arizona residents had participated in some type of off-highway vehicle activity in Arizona within the past two years. Of the 79% of Arizona residents who have not personally participated in any type of off-highway vehicle activities in Arizona within the past two years, most (72%) were not interested in participating in any type of off-highway vehicle activity for recreation or to gain access to places where there are no maintained roads. A quarter of Arizona residents who have not participated in off-highway vehicle activities showed interest in participating in off-highway vehicle activities.

Arizona residents who participated in off-highway vehicle use participated in many different off-highway vehicle activities. Thirty-eight percent participated in driving a REGISTERED VEHICLE off-road. Twenty-eight percent participated in each of the following activities: driving on an un-maintained road and driving on a trail. Seventeen percent had driven

completely off roads or trails, and eleven percent had driven on a maintained road but not a highway. A slightly smaller percentage 9% had driven an UNREGISTERED VEHICLE off-road as an activity they had participated in over the last two years.

A large majority (88%) of Arizona residents who had participated in off-highway vehicle activities over the last two years were satisfied with their off-highway vehicle experience (62% very and 26% somewhat satisfied). It should be noted that most satisfaction with off-highway vehicle experiences was reported as very satisfying. When probed further for why their off-highway vehicle experience was satisfying, the majority (65%) cited it was fun and enjoyable. Other reasons for satisfaction with their off-highway vehicle experience were: there were lots of places to go and plenty of access (30%), and it allows me to get to places that are normally inaccessible (19%). Other various responses that were given as reasons for satisfaction were reported by less than 5% of respondents.

Only 10% of Arizona residents were dissatisfied with their off-highway vehicle experience (6% somewhat and 4% very dissatisfied). When probed further for why their off-highway vehicle experience was dissatisfying 48%, reported there was nowhere to go or not enough access. This contrasts with the 30% of satisfied off-highway users who reported there were: lots of places to go and plenty of access. Other responses given as reasons for dissatisfaction were: disliked the regulations (19%), litter/unclean areas (10%) and don't know where to go (10%). Other various responses that were given as reasons for dissatisfaction were reported by less than 5% of respondents.

### **Awareness of Off-Highway Regulations**

Arizona residents who had participated in off-highway vehicle use were asked their opinion on the current off-highway vehicle regulations in Arizona. The largest percentage

(45%), though not quite a majority, were *satisfied* with the current off-highway vehicle regulations in Arizona. Satisfaction was nearly evenly split between very satisfied (23%) and somewhat satisfied (22%). Seventeen percent of participants were either very (6%) or somewhat (11%) *dissatisfied* with the current off-highway vehicle regulations in Arizona. It should be noted that a substantial number (35%) of participants did not know if they were satisfied or dissatisfied with the current off-highway vehicle regulations.

Of the 45% of participants who were satisfied with the laws and regulations governing off-highway vehicle use, in a multiple response question 41% felt the regulations were not too restrictive. Thirty-three percent felt the regulations allowed plenty of access and 20% felt the regulations were enforced properly.

Of the 17% of participants who were dissatisfied with the laws and regulations governing off-highway vehicle use, in a multiple response question a majority (53%) felt the regulations were too restrictive. Twenty-two percent felt the regulations did not allow for enough access, 17% felt the regulations were not enforced properly, and 11% felt the regulations were not restrictive enough.

In comparison, between those participants who were satisfied and dissatisfied, the top three reasons given for both sets of participants were exact opposites. Those participants who were satisfied viewed the regulations as not too restrictive, allowing plenty of access and enforced properly. Those participants who were dissatisfied viewed the regulations as too restrictive, limiting access and not enforced properly. The Arizona Game and Fish Department should keep in mind that 45% of participants compared to 17% of participants were satisfied with the current off-highway regulations. Any changes in the regulations for the benefit of those

who are currently dissatisfied may cause those participants who are currently satisfied with the regulations to become dissatisfied.

### **Evaluation of Off-Highway Vehicle Use over the Last Five Years**

Just over a third of off-highway vehicle participants felt that over the last five years off-highway vehicle access declined with an additional third that felt off-highway vehicle access had remained about the same over the last five years. Only 13% of participants felt that off-highway vehicle access had improved with an additional 18% who did not know if off-highway vehicle access had improved or declined in the last five years.

When asked specifically why they felt that off-highway vehicle access had either declined or improved many of the same causes appeared in both opinion sets. Those who thought access had declined stated existing trails and off-highway vehicle roads were not maintained and that there was less public land that the government opened to off-highway vehicle access. While, on the other hand, those who thought access had improved stated existing trails and off-highway vehicle roads were better maintained and that there existed more public lands which the government opened to off-highway vehicle access.

Of the 35% of participants who felt off-highway vehicle access had declined in the last five years, multiple reasons were given. The most popular reason for decline was that less public land was not available because the government denied access (36%). Thirty-percent said there was less public land available due to other purposes for use or development. Fifteen percent gave the following causes for decline: less private land on which landowners won't allow access and existing trails or off-highway vehicle roads were not maintained. Twelve percent gave the cause of less private land was available due to other use purposes or development.

Of the 13% of participants who felt off-highway vehicle access had improved over the last five years, most (27%) gave no specific reason saying they did not know why they felt off-highway vehicle access had improved. Just under a quarter (23%) of participants stated existing trails or off-highway vehicle roads were better maintained, 19% cited increased participation, and 12% reported there was more public land on which the government allowed more access.

### **Attitudes Toward the Arizona Game and Fish Department's Regulation of Off-Highway Vehicle Use**

All residents of Arizona, both participants and non-participants of off-highway vehicle activities, were asked about their opinions toward the Arizona Game and Fish Department's regulation of off-highway vehicle use. Each respondent was informed that the Arizona Game and Fish Department has responsibility in managing off-highway vehicle use in Arizona, including the enforcement of off-highway vehicle laws and providing information on off-highway vehicle activities to the public. Before this survey, over two-thirds (67%) of Arizona residents were *unaware* that the Arizona Game and Fish Department managed and regulated off-highway vehicle activities. Close to one-third (32%) of residents were *aware* the Arizona Game and Fish Department regulated off-highway vehicle use.

When asked where the funds to manage off-highway vehicle use and recreation in Arizona come from most residents said some form of taxes. The largest percentage (34%) of Arizona residents stipulated some unspecified form of taxes. An additional 24% stated a general state tax such as the state income tax or sales tax and 7% stated a federal tax. Twenty-four percent of residents did not know where the funds to manage off-highway vehicle use originated. Eleven percent of residents reported hunting and fishing licenses as a source of funding for the management of off-highway vehicle use.

Just over a third (34%) of Arizona residents felt that the Arizona Game and Fish Department should spend somewhat more (22%) or much more (12%) time and money enforcing off-highway vehicle laws. Just under a third (31%) of Arizona residents do not know if the Arizona Game and Fish Department should spend more or less time enforcing off-highway vehicle laws. Twenty-seven percent were satisfied with the time and money spent on enforcing off-highway vehicle laws; they felt the Department should continue to spend the same amount of time and money. Only 9% of residents felt that the Department should spend somewhat less (5%) or much less (4%) time and money enforcing off-highway vehicle laws.

A majority (55%) of residents felt the Department should spend more time and money informing and educating off-highway vehicle participants about off-highway vehicle rules and regulations (22% much more and 33% somewhat more). Only 5% felt less time and money should be spent on informing and educating off-highway vehicle participants about rules and regulations. Twenty-two percent of all residents did not know if the Department needed to spend more or less time and money on informing and educating off-highway vehicle participants.

### **Attitudes Toward Off-Highway Vehicle Participants**

Over two-thirds (67%) of Arizona residents agreed that a lot of off-highway vehicle participants violate off-highway vehicle laws. Forty-one percent of residents strongly agreed and 26% moderately agreed that a lot of off-highway vehicle participants violate off-highway laws. Only ten percent of residents disagreed that a lot of off-highway vehicle participants violate off-highway vehicle laws. Twenty-one percent of residents did not know if a lot of off-highway vehicle participants violated off-highway vehicle laws.

Of the sixty-seven percent of Arizona residents who felt that a lot of off-highway vehicle participants violate off-highway vehicle laws, the highest percentage (45%) thought that off-

highway vehicle participants most often violated trespassing laws. Thirty percent felt off-highway vehicle participants destroyed fragile habitat, and 21% said they were reckless or careless in the operation of the off-highway vehicle. Ten percent said off-highway vehicle participants drove too fast, and 8% cited drinking alcohol as an off-highway vehicle law violation.

### **Attitudes Toward Proposed Off-Highway Vehicle Regulations**

Just over two-thirds (67%) of Arizona residents agreed that people who operated off-highway vehicles in Arizona should be required to have licenses, just like automobile operators. Twenty-four percent disagreed that people who operate off-highway vehicles should be required to have a license. A large majority (89%) of Arizona residents agreed that there should be a minimum legal age to operate an off-highway vehicle unsupervised in Arizona. Only 8% felt that there should not be a minimum legal age for operating an off-highway vehicle unsupervised. Most (70%) Arizona residents agreed that the minimum legal age for operating an off-highway vehicle unsupervised should be between 16-20 years of age. Twenty percent felt the minimum age should fall between 11-15 years of age; 6% felt the minimum age should be between 21-25 years of age, and only 1% felt the minimum age should be between 6-10 years of age.

Seventy percent of Arizona residents supported the idea of a mandatory registration fee for off-highway vehicles if the registration fees were used to increase enforcement of off-highway vehicle laws and provide increased information regarding off-highway rules and activities (47% strongly supported and 23% moderately supported). Twenty-two percent opposed a mandatory registration fee (6% moderately and 16% strongly opposed).

### **Information Desired on Off-Highway Vehicle Activities**

Arizona residents who were interested in more information on off-highway vehicle use in Arizona were closely split between those who were interested in more information and those who were not interested in more information. A majority (53%) were *not* interested in more information on off-highway vehicle use in Arizona, while 45% of residents said they *were* interested in more information on off-highway vehicle use in Arizona. Of those who were interested in information on off-highway vehicle use, 65% wanted more information on the rules and regulations of OHV use. Forty-three percent wanted information on where to go to drive off-road, including maps. Other various types of information were requested, however all other requested types of information were less than the tenth percentile.

The best ways to provide information on off-highway vehicle use and activities to those who were interested is through direct mail (47%). Other means of disseminating information were through the Internet/WWW (19%), television (18%), pamphlets or brochures (16%) and newspapers (14%).

## ADDITIONAL ANALYSES

### Off-Highway Vehicle Terminology

#### *Off-Highway Vehicle and Off-Highway Vehicle Activities*

In a series of follow-up analyses a number of questions were analyzed for significant differences based on responses toward off-highway vehicle participation. Specifically, there were several significant differences between participants of off-highway vehicle activities and non-participants of off-highway vehicle activities within the last two years.

Participants had significantly different responses from non-participants to the question, “When you hear the terms ‘off-highway vehicle’ and ‘off-highway vehicle activities,’ what do you think of?” Significantly [ $\chi^2(2, n=1008) = 6.79, p < .05$ ] more participants responded that they thought of ‘driving an ATV such as a 4-wheeler off-road.’ Sixty-four percent of participants, compared to 55% of non-participants, responded they thought of driving an ATV such as a 4-wheeler off road.

When asked, “When you hear the terms ‘off-highway vehicle’ and ‘off-highway vehicle activities,’ what do you think of?” Significantly more [ $\chi^2(2, n=1008) = 18.52, p < .001$ ] participants (5% of participants versus 1% of non-participants) indicated a generic “positive” response (having fun, recreating, etc.).

Participants were not only significantly more likely to give a positive response, they were also significantly [ $\chi^2(2, n=1008) = 8.45, p < .05$ ] less likely (3% of participants versus 9% of non-participants) to give a generic “negative” response (destroying the environment, etc.), when prompted.

Significantly [ $\chi^2(2, n=1008) = 13.28, p < .01$ ] fewer (6% of participants versus 15% of non-participants) participants responded that they did not know when asked, “When you hear the terms ‘off-highway vehicle’ and ‘off-highway vehicle activities,’ what do you think of?”

People who did not know if they had participated in an off-highway activity had a significantly [ $\chi^2(2, n=1008) = 26.35, p < .001$ ] greater likelihood of indicating that they thought of hunting when asked, “When you hear the terms ‘off-highway vehicle’ and ‘off-highway vehicle activities,’ what do you think of?” Seventeen percent of the, “don’t know” indicated hunting versus 1% each for participants and non-participants.

There were no other significant participation-based differences on the question “When you hear the terms ‘off-highway vehicle’ and ‘off-highway vehicle activities,’ what do you think of?”

### ***Off-Road Vehicle and Off-Road Vehicle Activities***

Significant differences did exist between participants and non-participants in several other questions. Participants of off-highway vehicle activities had significantly different responses from non-participants to the question, “When you hear the terms ‘*off-road vehicle*’ and ‘*off-road vehicle activities*,’ what do you think of?” Participants were significantly [ $\chi^2(2, n=1008) = 15.00, p < .01$ ] less likely to say they did not know when asked, “When you hear the terms ‘off-road vehicle’ and ‘off-road vehicle activities,’ what do you think of?” Four percent of participants compared to 14% of non-participants responded “don’t know” to this question.

Participants were significantly [ $\chi^2(2, n=1008) = 6.10, p < .05$ ] more likely to respond “driving an ATV, such as a 4-wheeler, off-road” compared to non-participants in response to the terms “off-road vehicle” and “off-road vehicle activities.” Sixty percent of participants compared to 52% of non-participants gave the response “driving an ATV, such as a 4-wheeler, off-road.”

Participants were also significantly [ $\chi^2(2, n=1008) = 6.46, p < .05$ ] less likely (3% of participants versus 8% of non-participants) to give a generic “negative” response such as destroying the environment as a response to “off-road vehicle” or “off-road vehicle activities.”

As with the previous questions concerning the terminology of off-highway use those who answered “don’t know” regarding their participation in off-highway vehicle activities were significantly [ $\chi^2(2, n=1008) = 22.38, p < .001$ ] more likely to answer that they thought “off-road” activities were related to hunting. Seventeen percent of those who said, “don’t know” to the question, “Within the past two years, have you personally participated in any type of off-highway vehicle activities in Arizona?” indicated they thought off-road activities were related to hunting. Only 1% of participants and 1% of non-participants indicated they associated “off-road” with hunting.

### **Knowledge about Off-Highway Vehicle Use**

Those who said that they did not know if they had participated in off-highway vehicle activities in the past two years in the state of Arizona were significantly [ $\chi^2(6, n=1008) = 83.74, p < .001$ ] more likely to indicate that they had heard a lot about off-highway vehicle activities in the past two years. Fifty percent of those who responded “don’t know,” versus, 38% of participants and 14% of non-participants, indicated they had heard a lot about off-highway vehicle activities. It should be noted that for all questions involving the “don’t know” response there were very few individuals who responded that they didn’t know ( $n=6$ ) if they had participated in off-road activities in Arizona in the past two years, and so all of these “don’t know” results should be viewed with caution.

There were no significant differences between those interested in and those not interested in participating in any type of off-highway vehicle activities in the amount of information they

had heard about off-highway vehicle activities [ $\chi^2(6, n=801) = 12.03, p = .06$ ]. There were no significant differences between those interested in and those not interested in participating in any type of off-highway vehicle activities in the level at which they felt informed or uninformed about the laws and regulations of off-highway and off-road activities [ $\chi^2(10, n=801) = 10.27, p = .42$ ].

### **Awareness of Off-Highway Regulations**

Participants indicated that they felt significantly [ $\chi^2(2, n=1008) = 57.84, p < .001$ ] more informed about the laws and regulations concerning off-highway and off-road use in Arizona compared to non-participants. Eighteen percent of participants reported being very informed and 18% reported being moderately informed, compared to 6% of non-participants who reported being very informed and 13% who reported being moderately informed.

As one would hope, those who indicated that they had heard more about off-highway vehicle activities over the past two years also tended to feel more informed about off-highway laws and regulations. There was a significant relationship between “hearing” and “knowing” with higher amounts of “hearing” associated with higher amounts of “knowing,”  $r_s(978) = .46, p < .001$ . \*Those who indicated that they did not know if they had heard about off-highway vehicle activities and individuals who indicated that they did not know if they felt informed about the laws and regulations concerning off-highway and off-road use were eliminated from this analysis.

There was no significant [ $\chi^2(25, n=207) = 17.28, p = .87$ ] relationship between the level of satisfaction in off-highway vehicle experiences in Arizona over the past two years and the level of knowledge about off-highway and off-road use in Arizona. There was, however, a significant [ $\chi^2(25, n=207) = 83.71, p < .001$ ] relationship between satisfaction with the current

off-highway vehicle regulations and the level of knowledge about off-highway and off-road use in Arizona. Those who felt more satisfied tended to be more informed about off-highway vehicle regulations.

### **Knowledge of Off-Highway Funding Mechanisms**

Participants were also significantly [ $\chi^2(2, n=1008) = 6.91, p < .05$ ] more likely to have indicated that they thought federal taxes were used to manage off-highway vehicle use and recreation. Eleven percent of participants compared to 6% of non-participants and zero “don’t know” responders indicated federal taxes fund off-highway vehicle use. They were also significantly [ $\chi^2(2, n=1008) = 12.65, p < .01$ ] more likely to have indicated that they thought hunting and fishing licenses were used to manage off-highway vehicle use and recreation. Seventeen percent of participants compared to 9% of non-participants and zero “don’t know” responders indicated hunting and fishing licenses manage off-highway vehicle use and recreation.

### **Attitudes Toward the Arizona Game and Fish Department’s Regulation of Off-Highway Vehicle Use**

Participants were significantly [ $\chi^2(10, n=1008) = 88.62, p < .001$ ] less likely to indicate that the Arizona Game and Fish Department should spend much more (11%) or somewhat more (18%) money enforcing off-highway vehicle laws than non-participants (12% of non-participants indicated much more and 23% of non-participants indicated somewhat more should be spent). Although participants were more likely than non-participants to say the Department should spend the same amount (47%) of money on enforcing off-highway vehicle laws. Only 22% of non-participants said that funding should remain the same.

Participants had significantly [ $\chi^2(10, n=1008) = 41.87, p < .001$ ] higher ratings for expenditures for informing and educating off-highway vehicle participants about off-highway vehicle rules and regulations. Participants supported higher spending for informing and educating participants about rules and regulations with 28% saying that much more money should be spent, and 37% saying that more money should be spent. This is relative to 21% of non-participants who said much more should be spent and 32% of non-participants who said more money should be spent.

### **Attitudes Toward Off-Highway Vehicle Participants**

Participants were significantly [ $\chi^2(10, n=1008) = 58.40, p < .001$ ] less supportive of the statement that off-highway vehicle participants violate off-highway vehicle laws. Thirty-seven percent of participants strongly agreed with this statement whereas 43% of non-participants strongly agreed with this statement.

There was one significant difference between participants and non-participants in relation to violations by off-highway vehicle users. Significantly more (5%) non-participants [ $\chi^2(2, n=1008) = 7.44, p < .05$ ] indicated that running over/killing animals was a law often violated by off-highway vehicle users. Only 2% of participants indicated this response. Very few respondents indicated this response at all (only 5%) so this result should be viewed cautiously.

### **Attitudes Toward Proposed Off-Highway Vehicle Regulations**

Participants (78%) were significantly [ $\chi^2(4, n=1008) = 39.72, p < .001$ ] less likely to indicate that there should be a minimum legal age to operate an off-highway vehicle unsupervised in Arizona compared to non-participants (92%). There was a significant difference [ $t(863) = -2.41, p < .05$ ] in the age levels that participants ( $M=15.97, SD=2.59$ ) and non-

participants ( $M=16.46$ ,  $SD=2.22$ ) proposed for operating an off-highway vehicle unsupervised. Participants proposed a younger age than non-participants for when an individual should be able to operate an off-highway vehicle unsupervised. \*All “don’t know” responses were eliminated from this analysis.

Participants (28%) were significantly [ $\chi^2(10, n=1008) = 106.44$ ,  $p < .001$ ] less likely to lend strong support for a mandatory registration fee for off-highway vehicles compared to non-participants (52%).

### **Categorization of Participants and Non-Participants**

Participants were significantly more likely to have hunted [ $\chi^2(4, n=1008) = 76.40$ ,  $p < .001$ ] and to have fished [ $\chi^2(4, n=1008) = 59.56$ ,  $p < .001$ ] in Arizona in the past two years. More participants indicated that they had hunted (29%) and fished (51%) than non-participants (7% and 24% respectively).

## ADDITIONAL RESPONDENT COMMENTS

Biggest concern is smaller vehicles tearing up the desert.

Dangerous behavior because of population. Kids almost got shot because they weren't paying attention to shooters. Need more enforcement.

Don't close off areas; there should be multiple uses. The real problem is the developers.

Excellent survey!!! Need more info! She doesn't know the rules, etc. but her and her daughter both participate.

Garbage is everywhere, and there should be a fee to use the roads so we could keep the slobs off the roads.

Give us more access to information!

Happy with campgrounds--Lee's Ferry is very nice.

Her husband has fished and hunted, but she has not.

I canoe and am careful with resources; I haul out more trash than I bring in.

I hate environmentalists. They are closing off our public land so we can't use it anymore!!

I love the state of Arizona.

Lower the license fees for retirees.

Money should not come from hunters or fishermen.

Off-highway use of registered vehicles should not be joined with criticism of off-road vehicular destructive usage.

Should not restrict land so much - too many governmental restrictions.

The department has enough to do already; a different department should handle this [OHV regulation].

The off-road participants need to be more respectful to the environment and stay in their designated area.

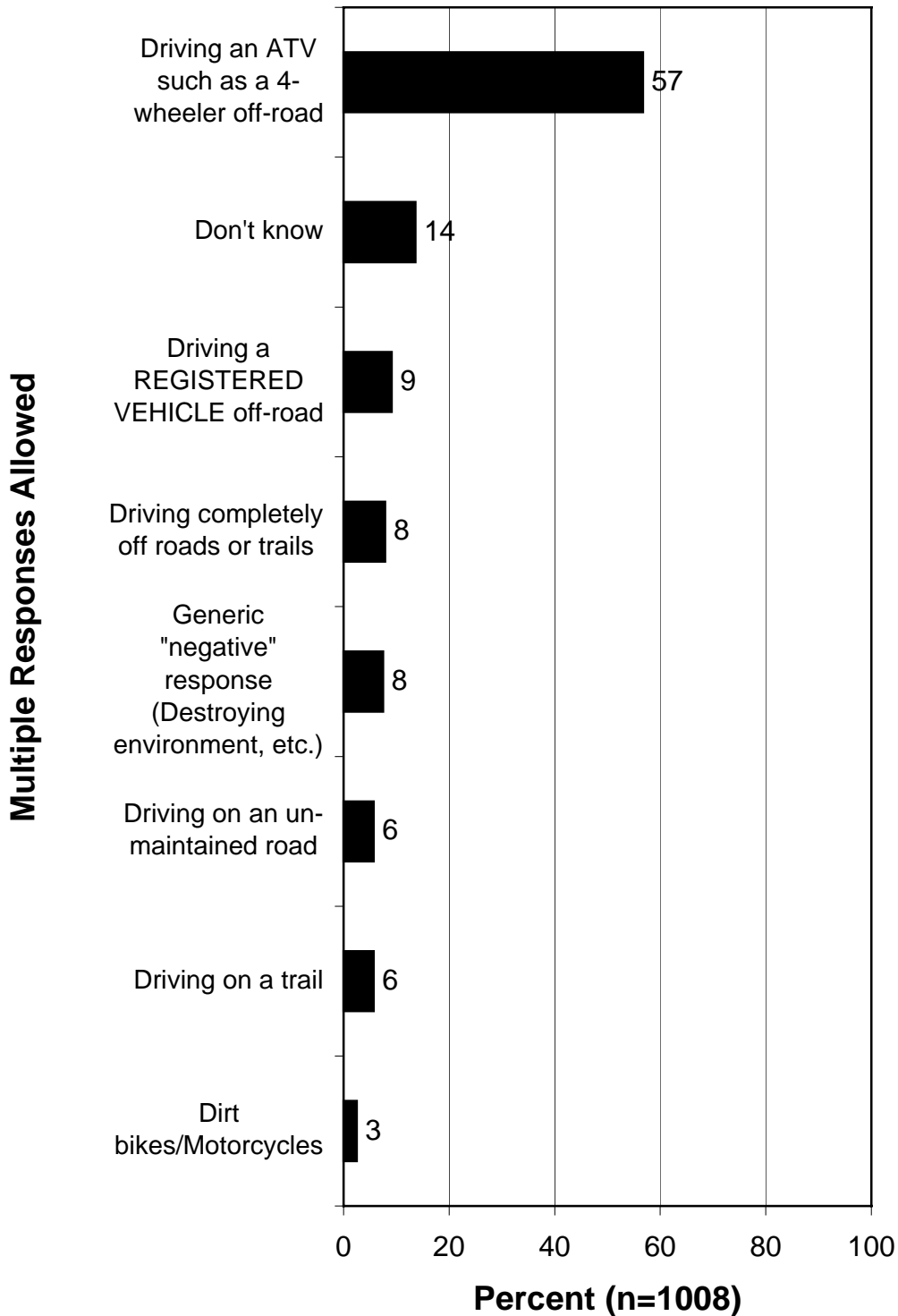
There should be a specific place for it [off-road use] where it won't destroy habitats.  
There should be a high fee for using OHV areas.

I am very much in support of Arizona Game and Fish [Department]--they're wonderful people.

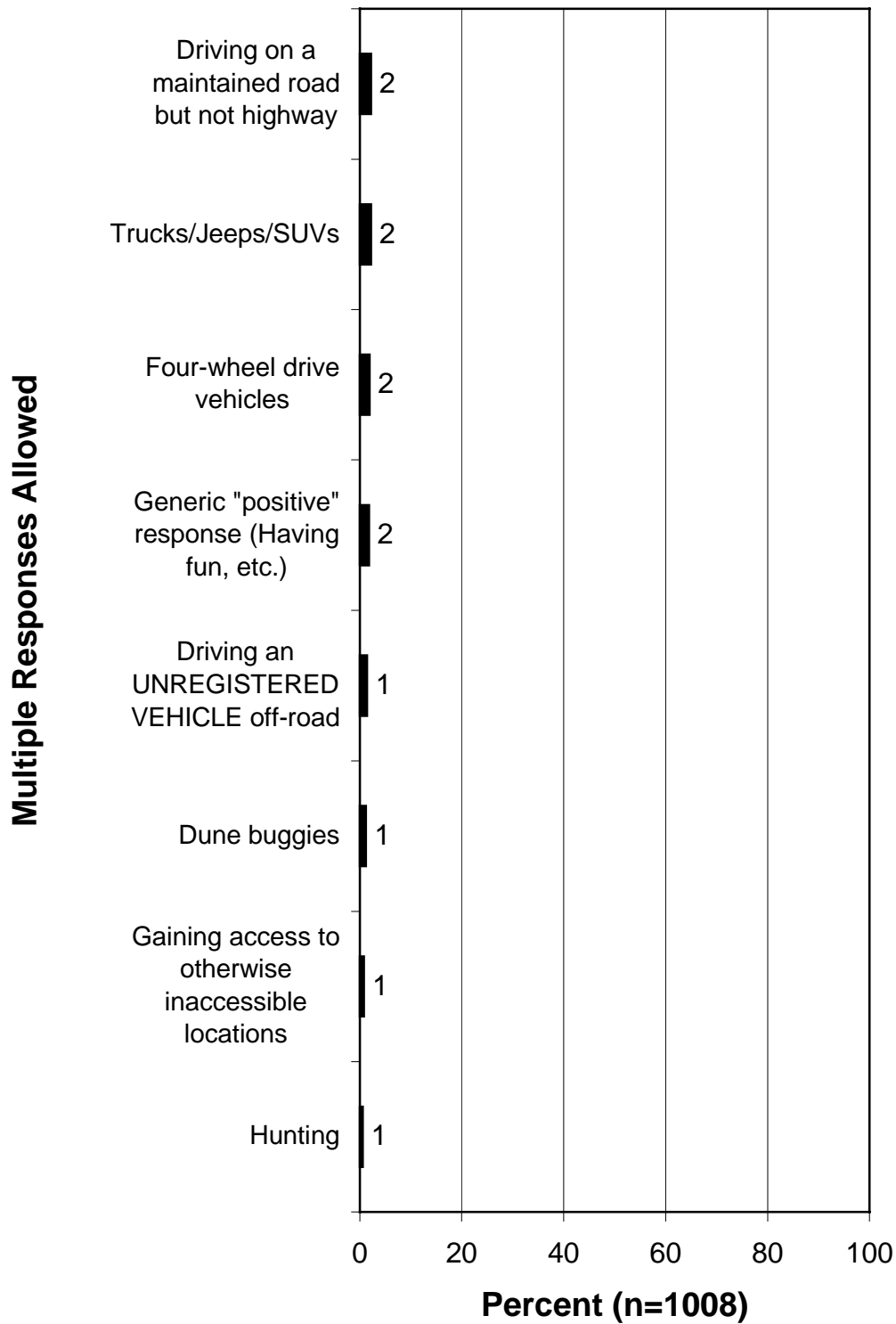
We need man-made lakes filled with fish to keep the bears away from the residential areas.

## **GRAPHS**

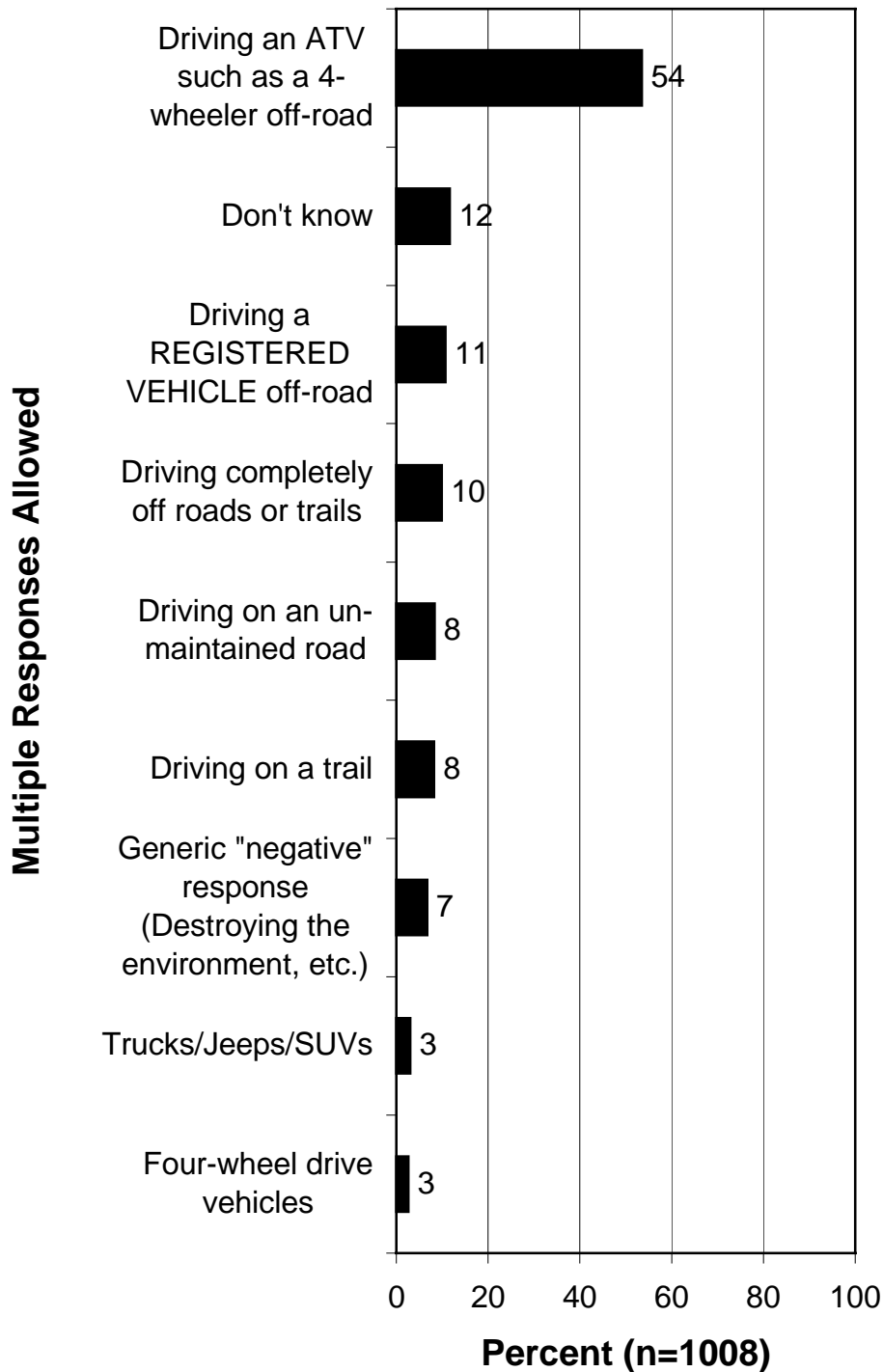
**Q6. When you hear the terms "off-highway vehicle" and "off-highway vehicle activities," what do you think of?**



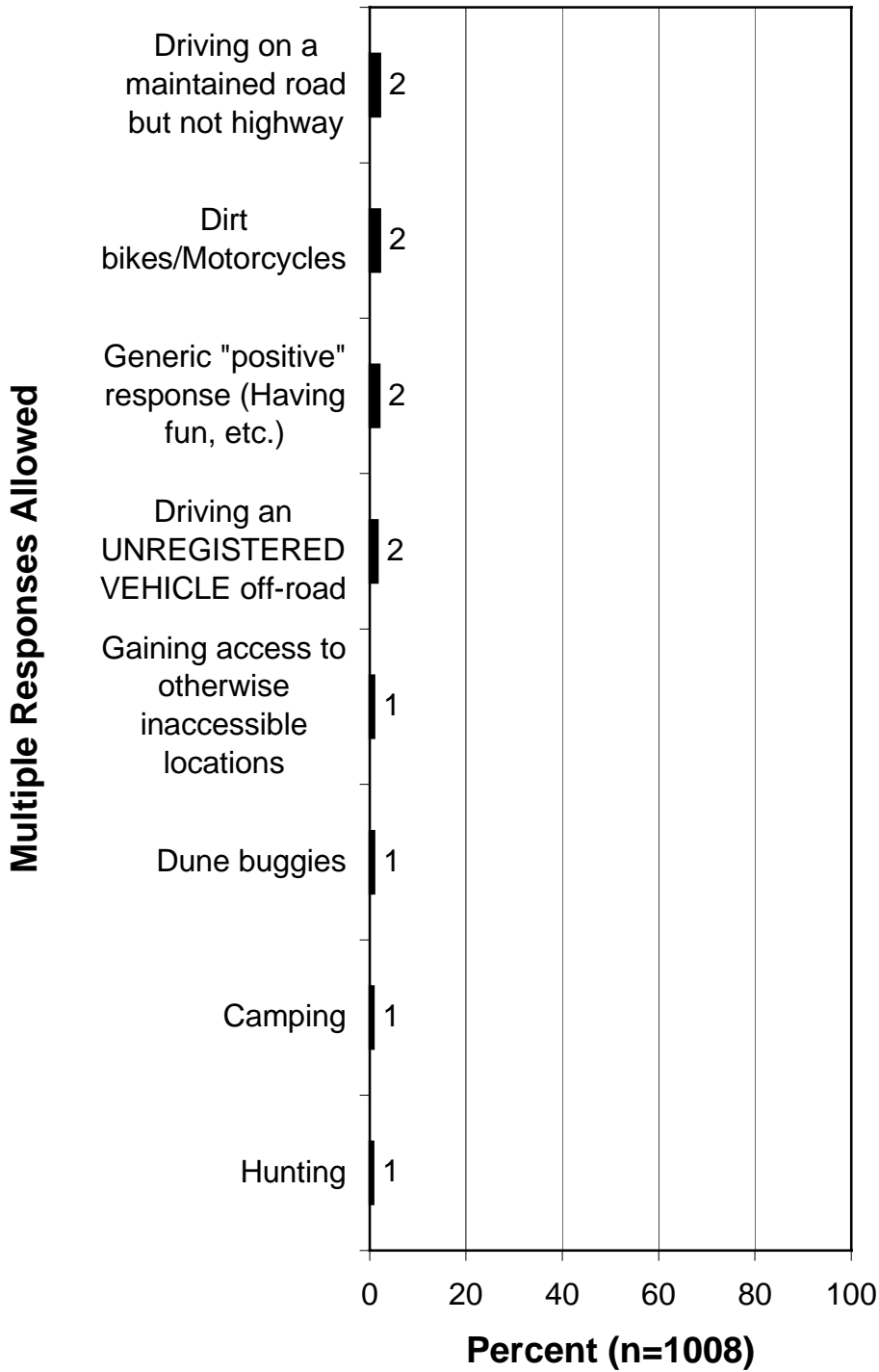
**Q6 continued. When you hear the terms "off-highway vehicle" and "off-highway vehicle activities," what do you think of?**



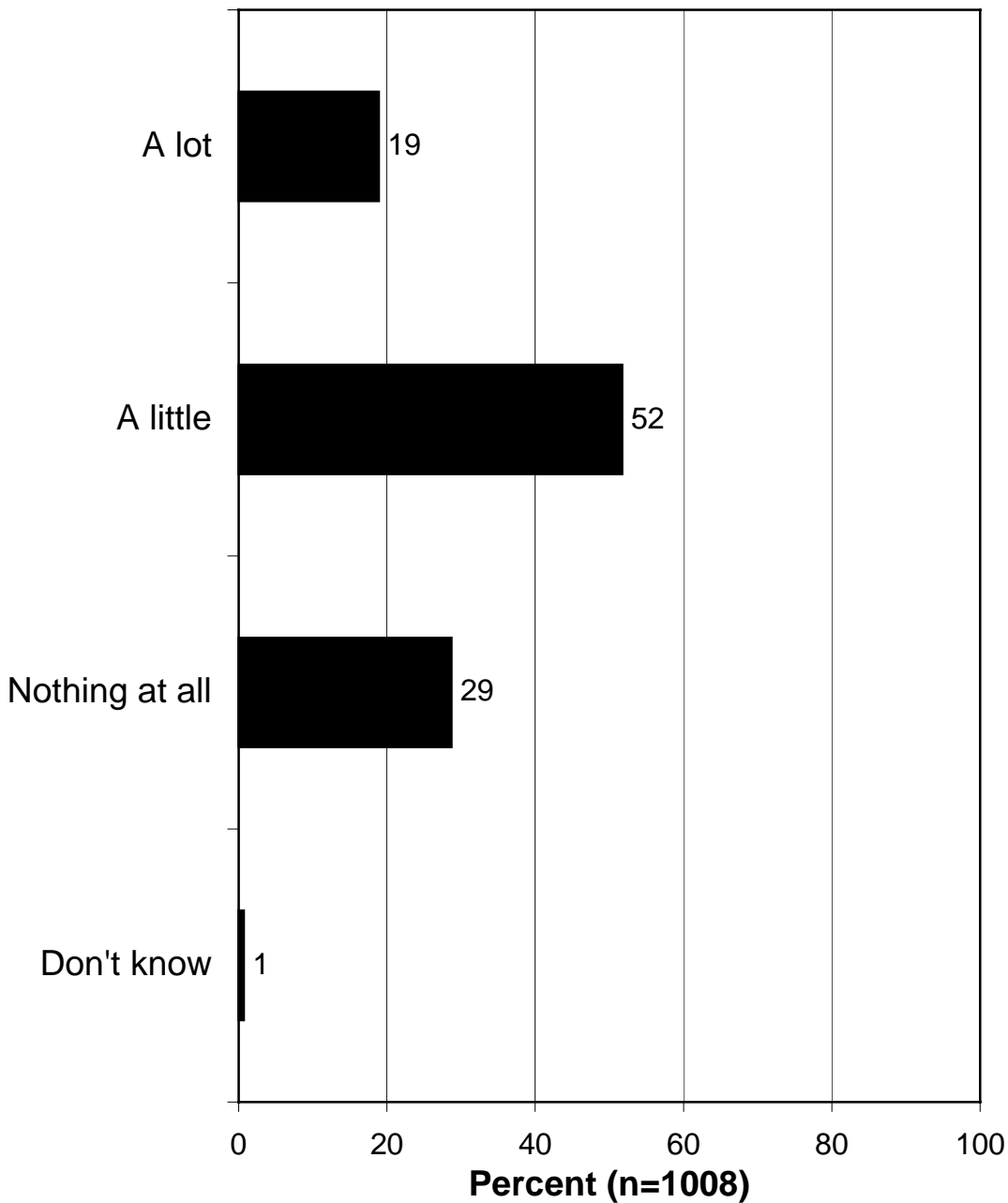
**Q9. When you hear the terms "off-road vehicle" and "off-road vehicle activities," what do you think of?**



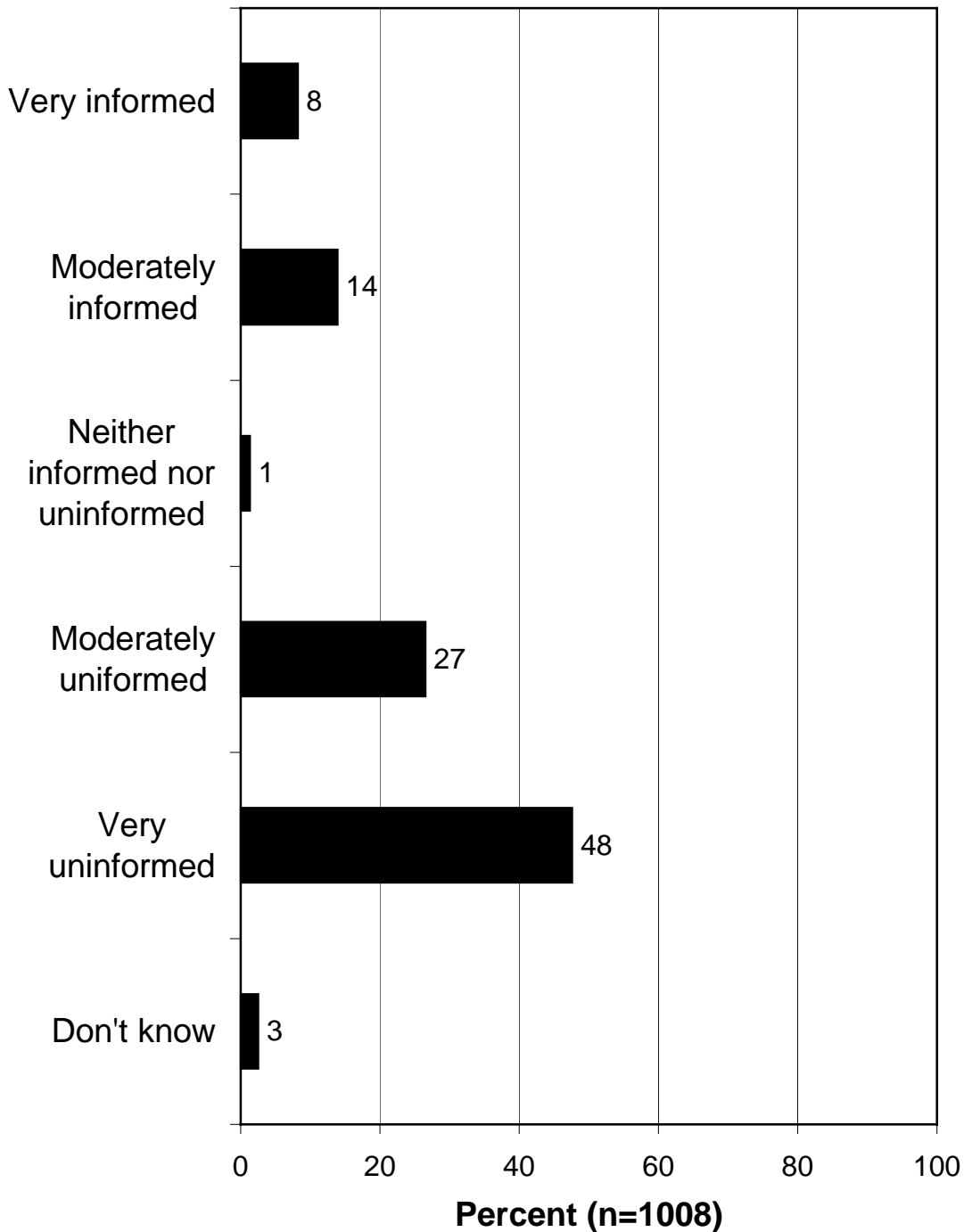
**Q9 continued. When you hear the terms "off-road vehicle" and "off-road vehicle activities," what do you think of?**



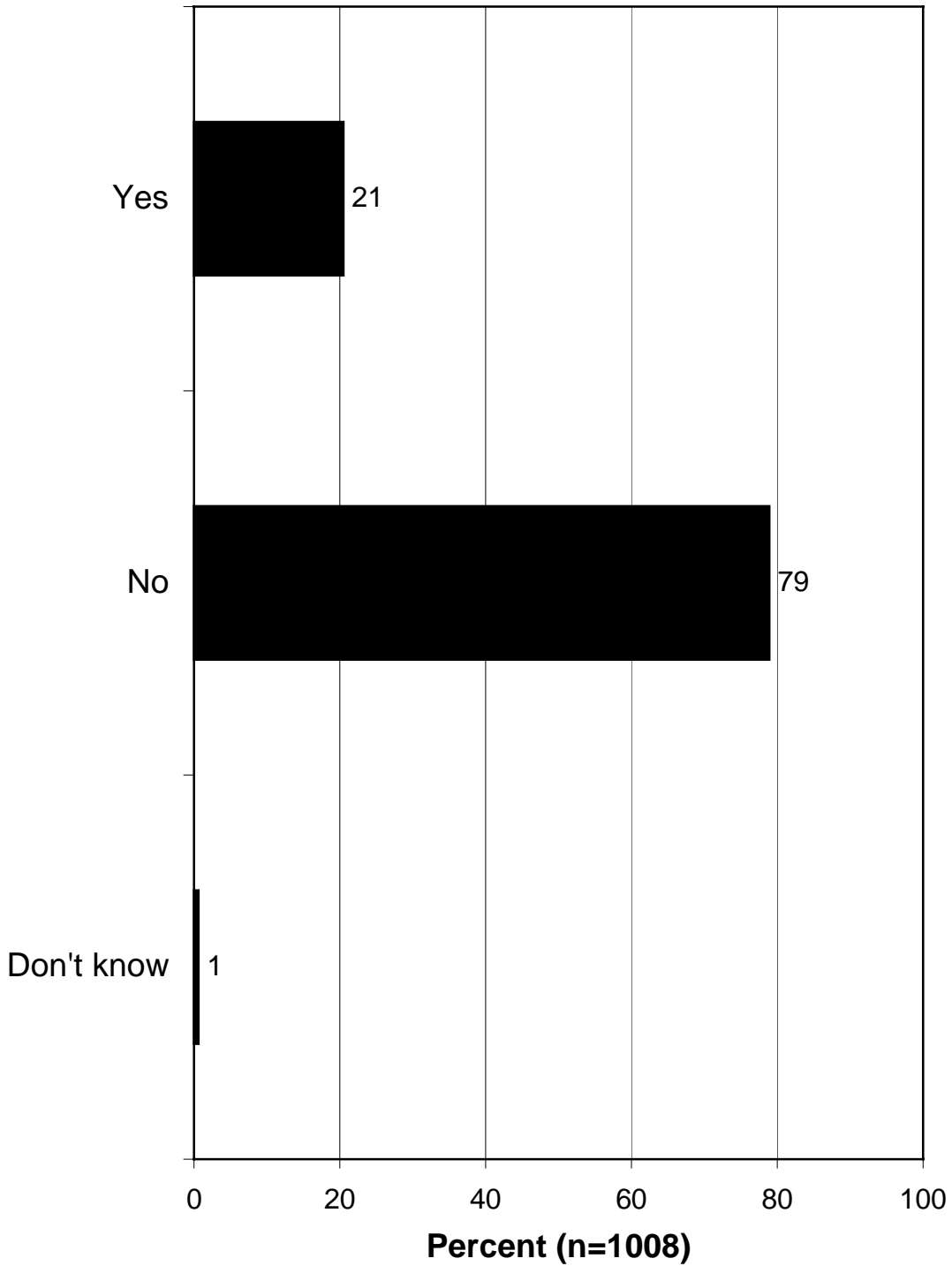
**Q11. How much have you heard about off-highway vehicle activities in Arizona over the past two years, that is, driving off of maintained roads for recreation or to gain access to places maintained roads do not go?**



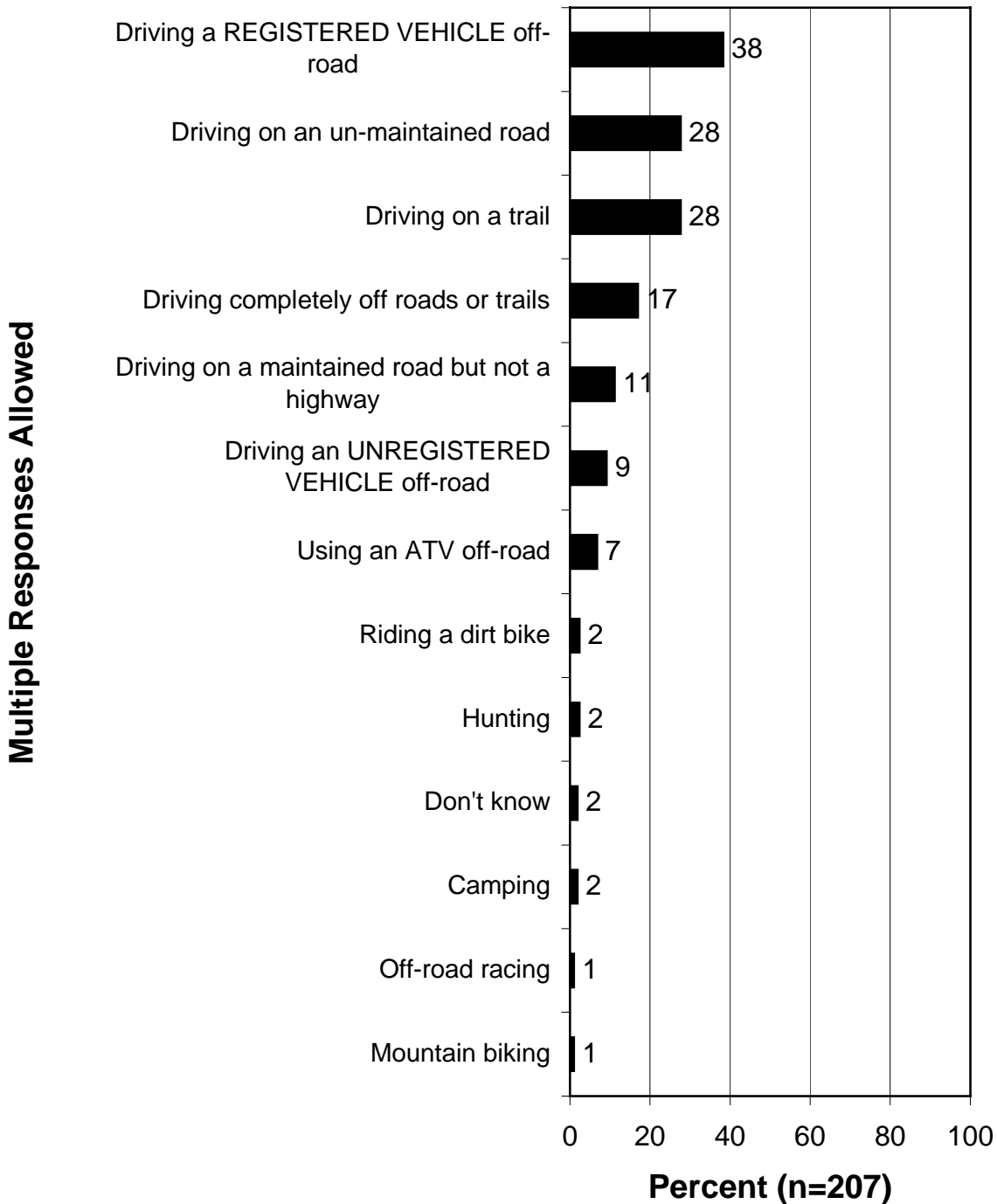
**Q12. Would you say you feel informed or uninformed about the laws and regulations concerning off-highway and off-road use in Arizona?**



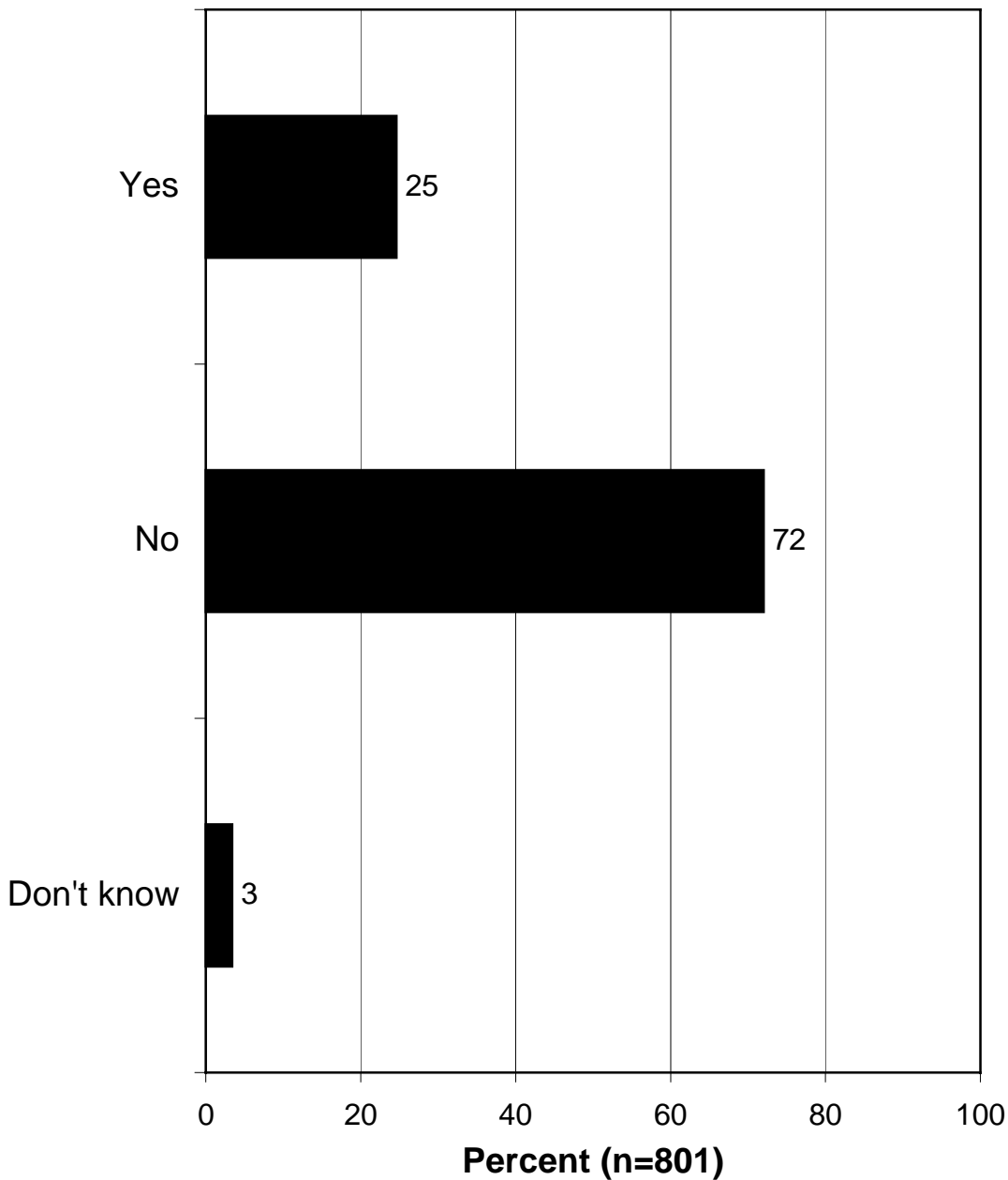
**Q13. Within the past two years, have you personally participated in any type of off-highway vehicle activities in Arizona?**



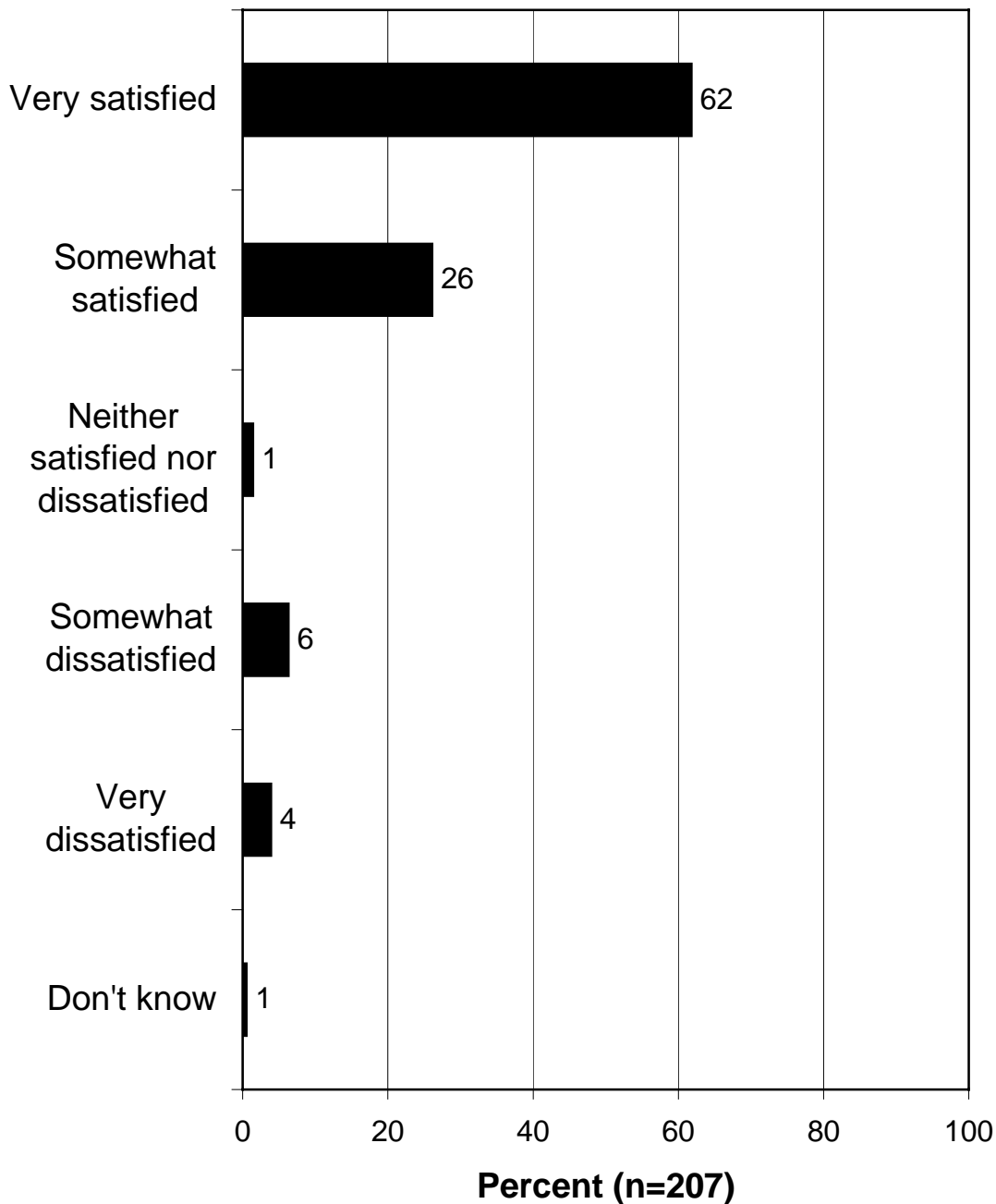
**Q15. Specifically, in what types of off-highway vehicle activities have you participated over the past two years?  
(Participants)**



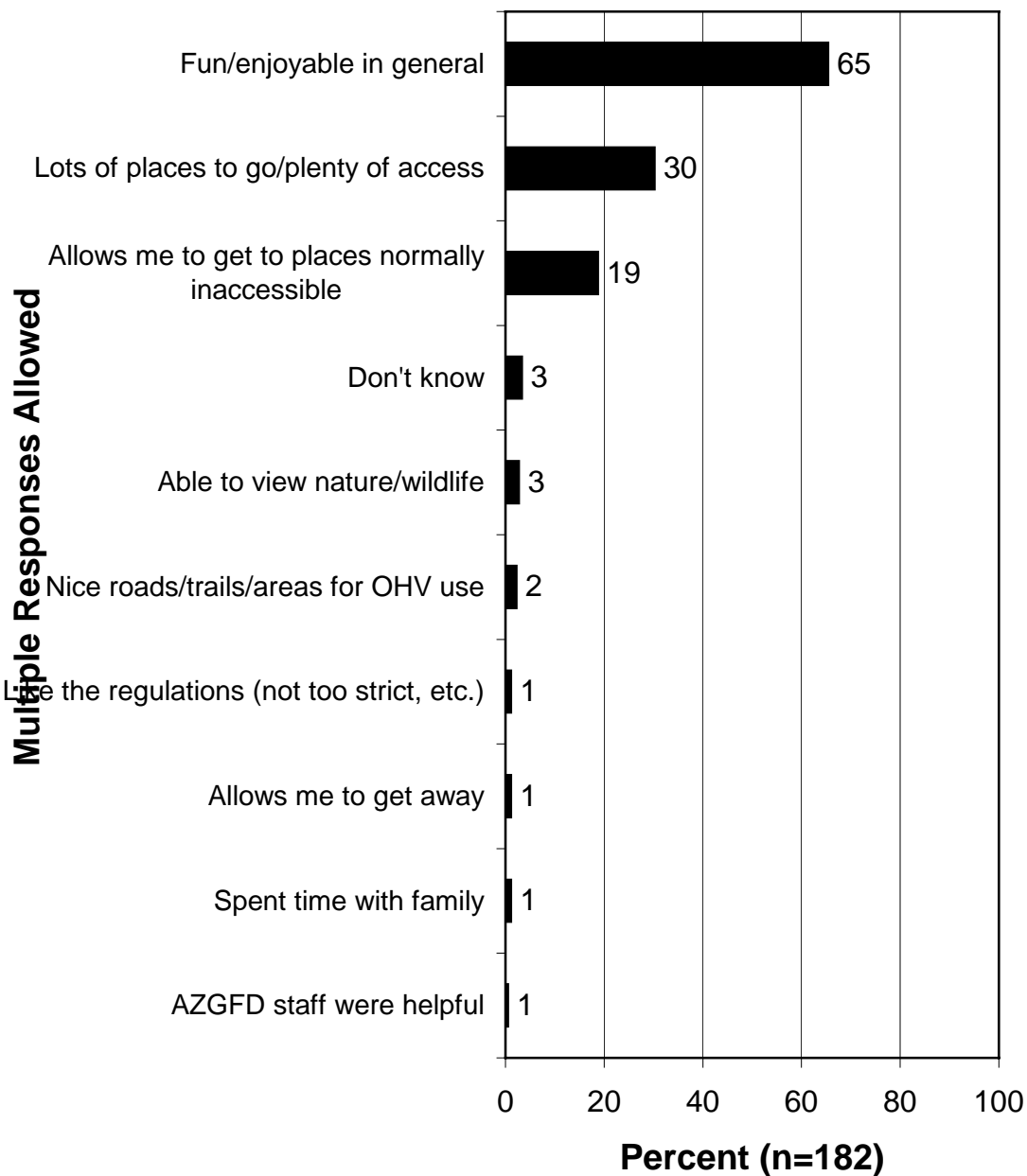
**Q17. Would you be interested in participating in any type of off-highway activities for recreation or to gain access to places where there no maintained roads?  
(Non-Participants)**



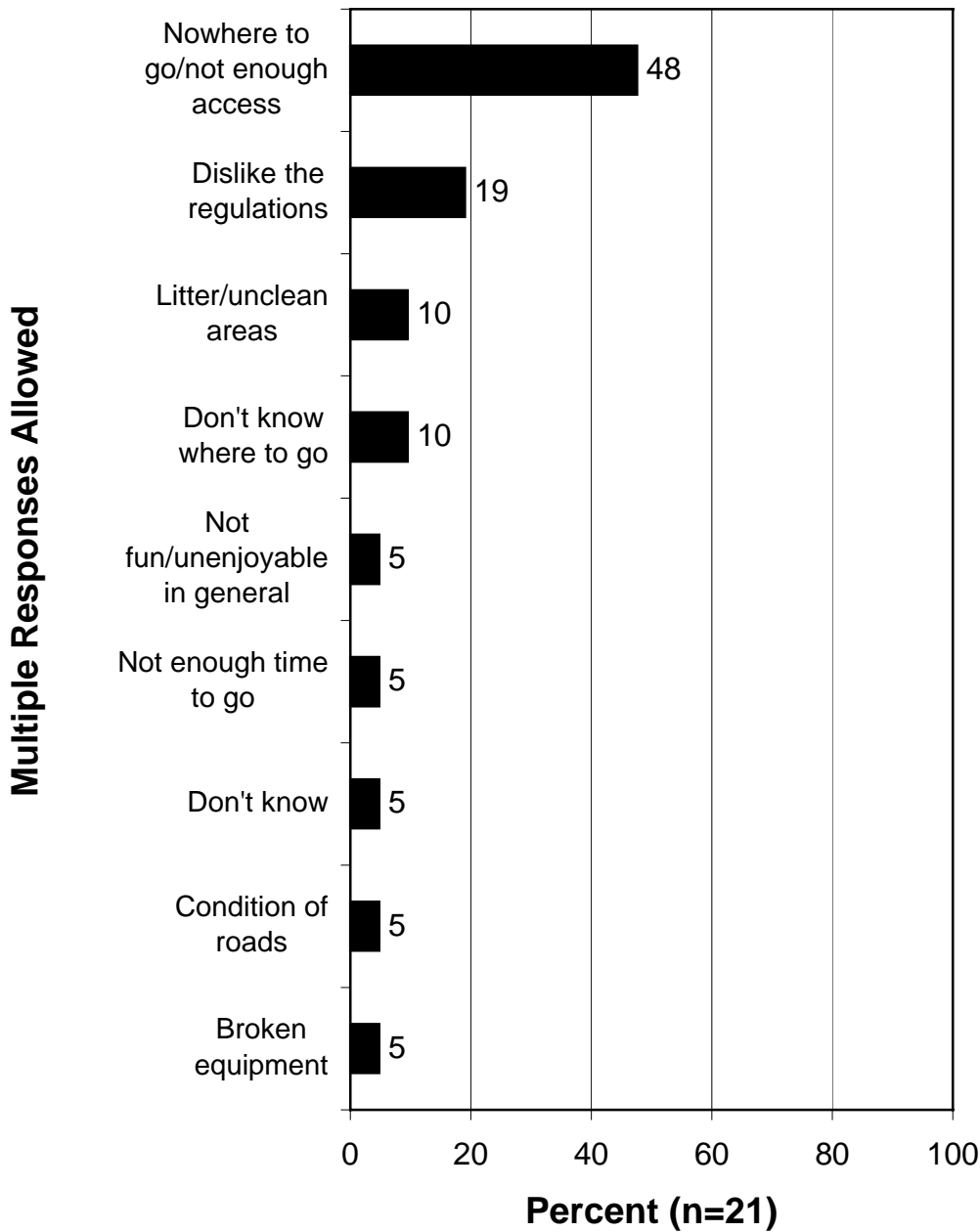
**Q18. In general, are you satisfied or dissatisfied with your off-highway vehicle experiences in Arizona over the past two years?  
(Participants)**



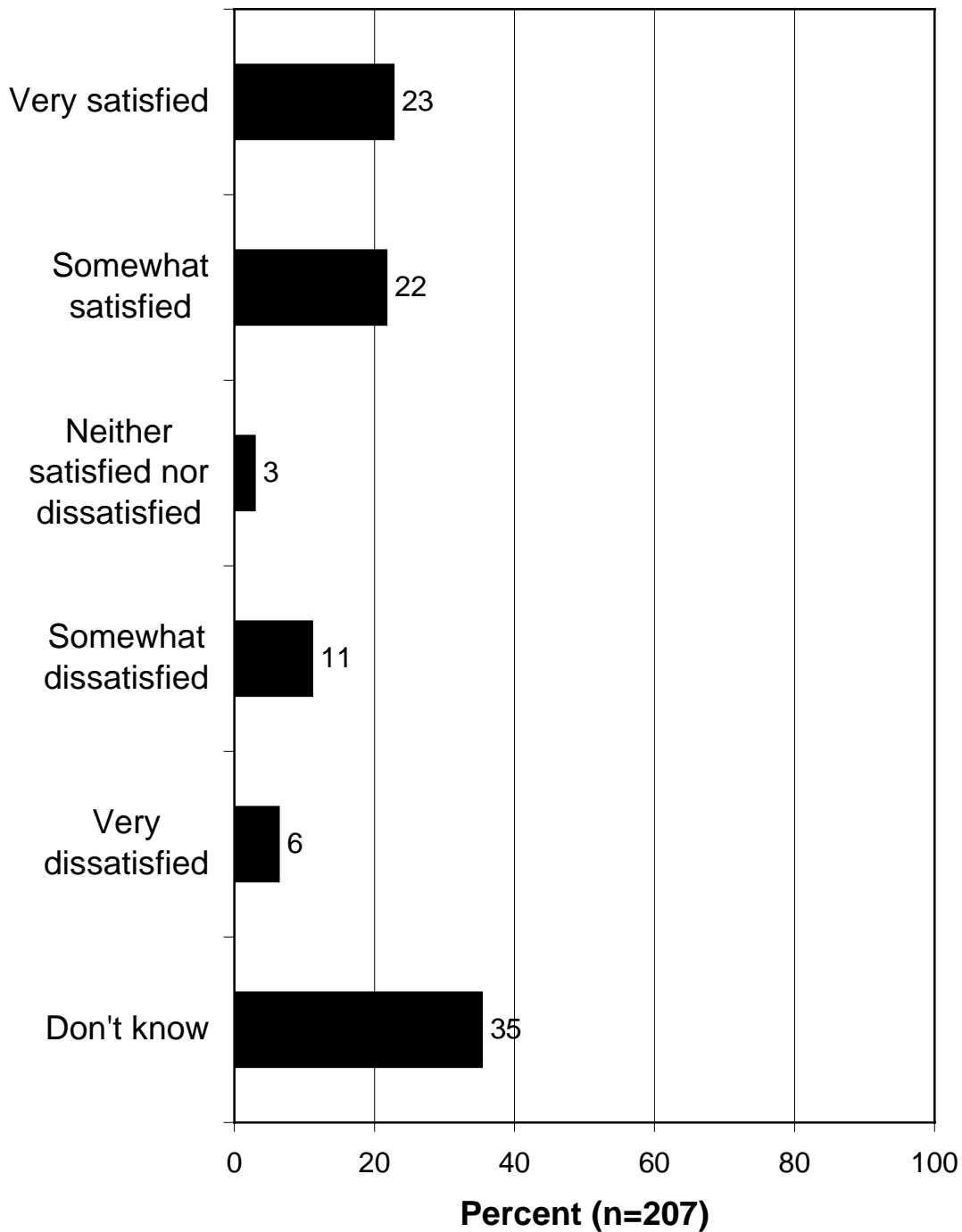
**Q20. Why are you satisfied with your off-highway vehicle experiences in Arizona over the past two years?  
(Asked of those Participants who reported satisfaction with their OHV experiences)**



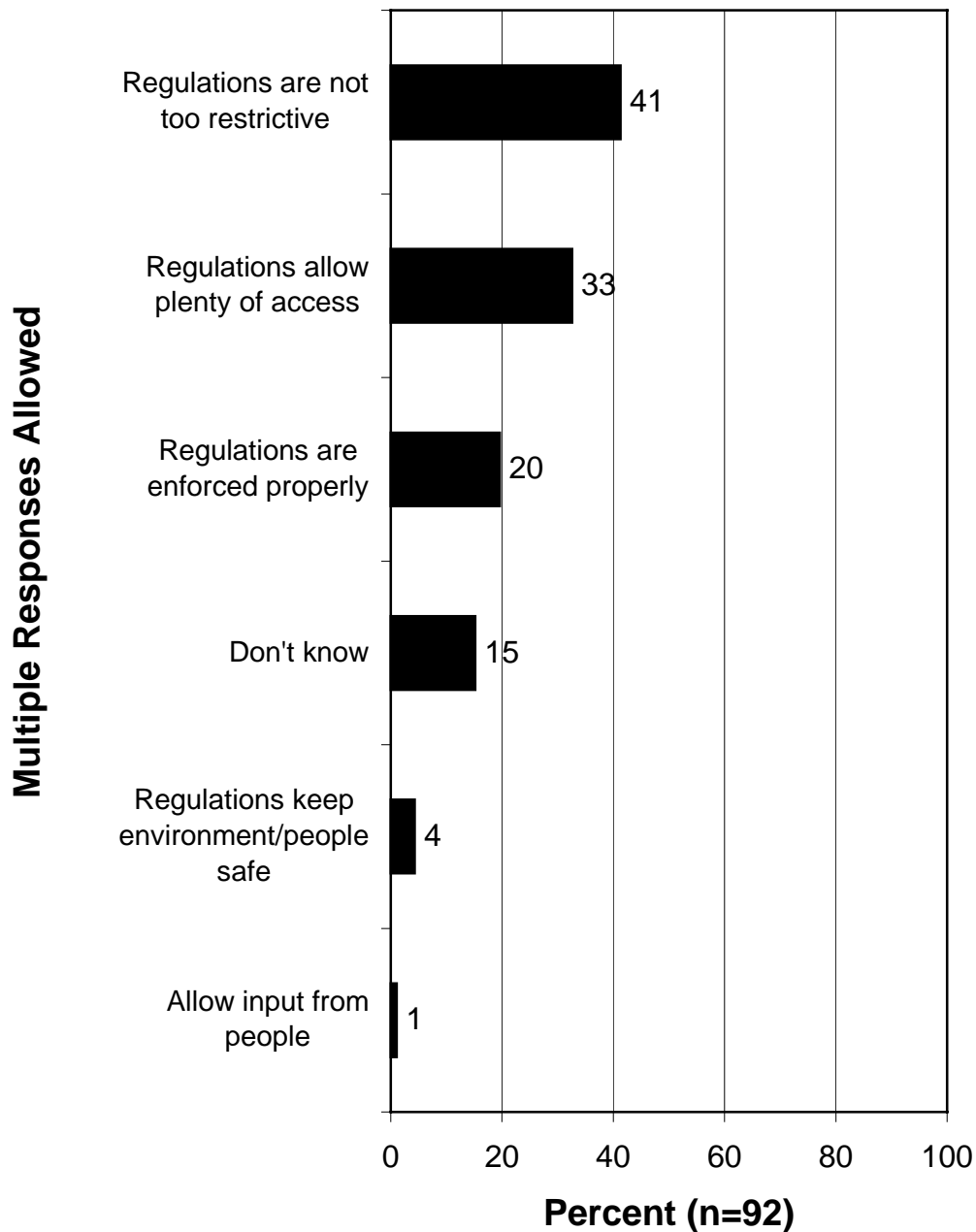
**Q23. Why are you dissatisfied with your off-highway vehicle experiences in Arizona over the past two years?  
(Asked of those Participants who reported dissatisfaction with their OHV experiences)**



**Q25. In general, are you satisfied or dissatisfied with the current off-highway vehicle regulations in Arizona?  
(Participants)**

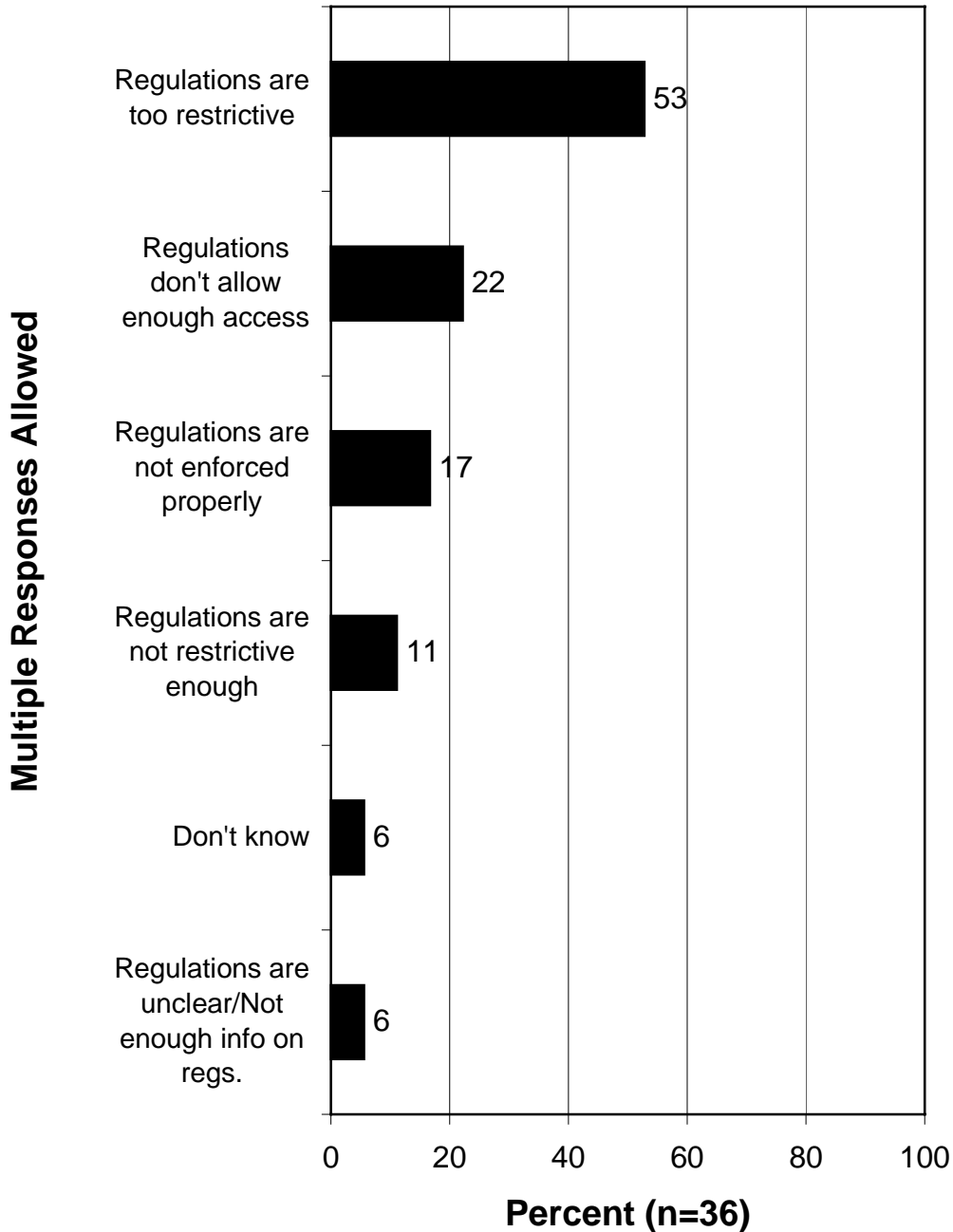


**Q27. Why are you satisfied with the current off-highway vehicle regulations in Arizona?**  
**(Asked of those Participants who reported satisfaction with OHV regulations)**

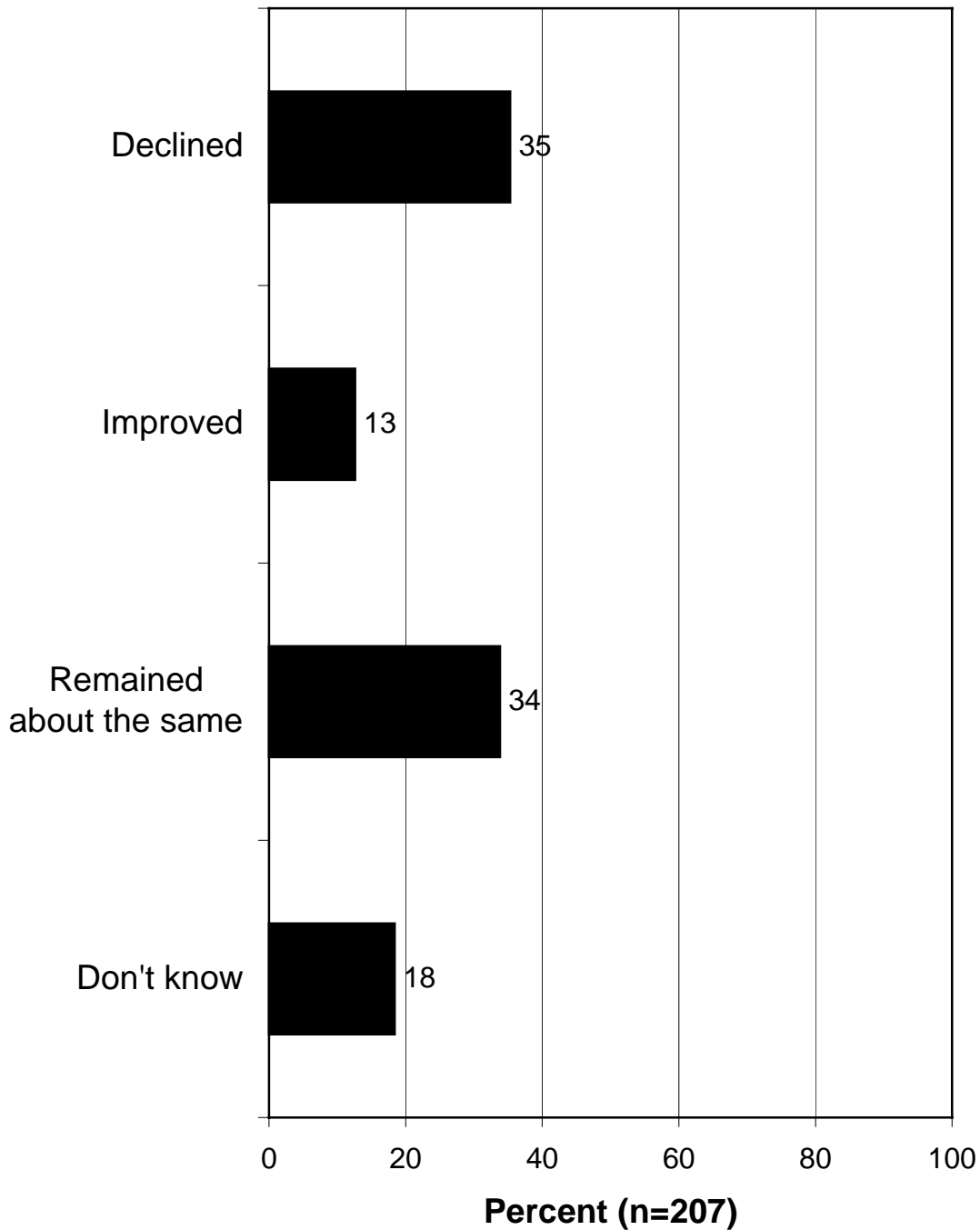


**Q30. Why are you dissatisfied with the current off-highway vehicle regulations in Arizona?**

**(Asked of those Participants who reported dissatisfaction with OHV regulations)**

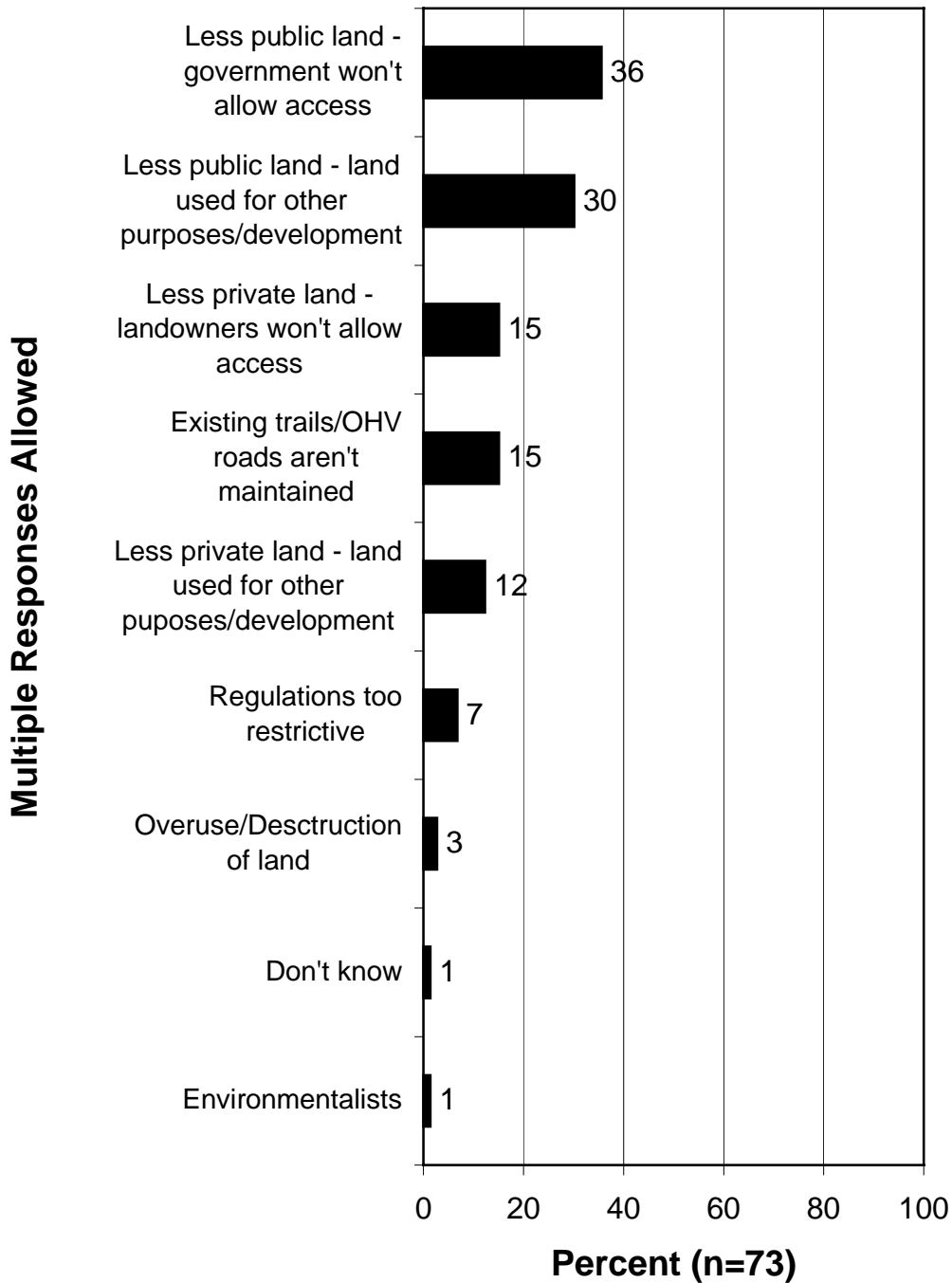


**Q32. In the last five years, do you think off-highway vehicle access has declined, improved or remained about the same?  
(Participants)**

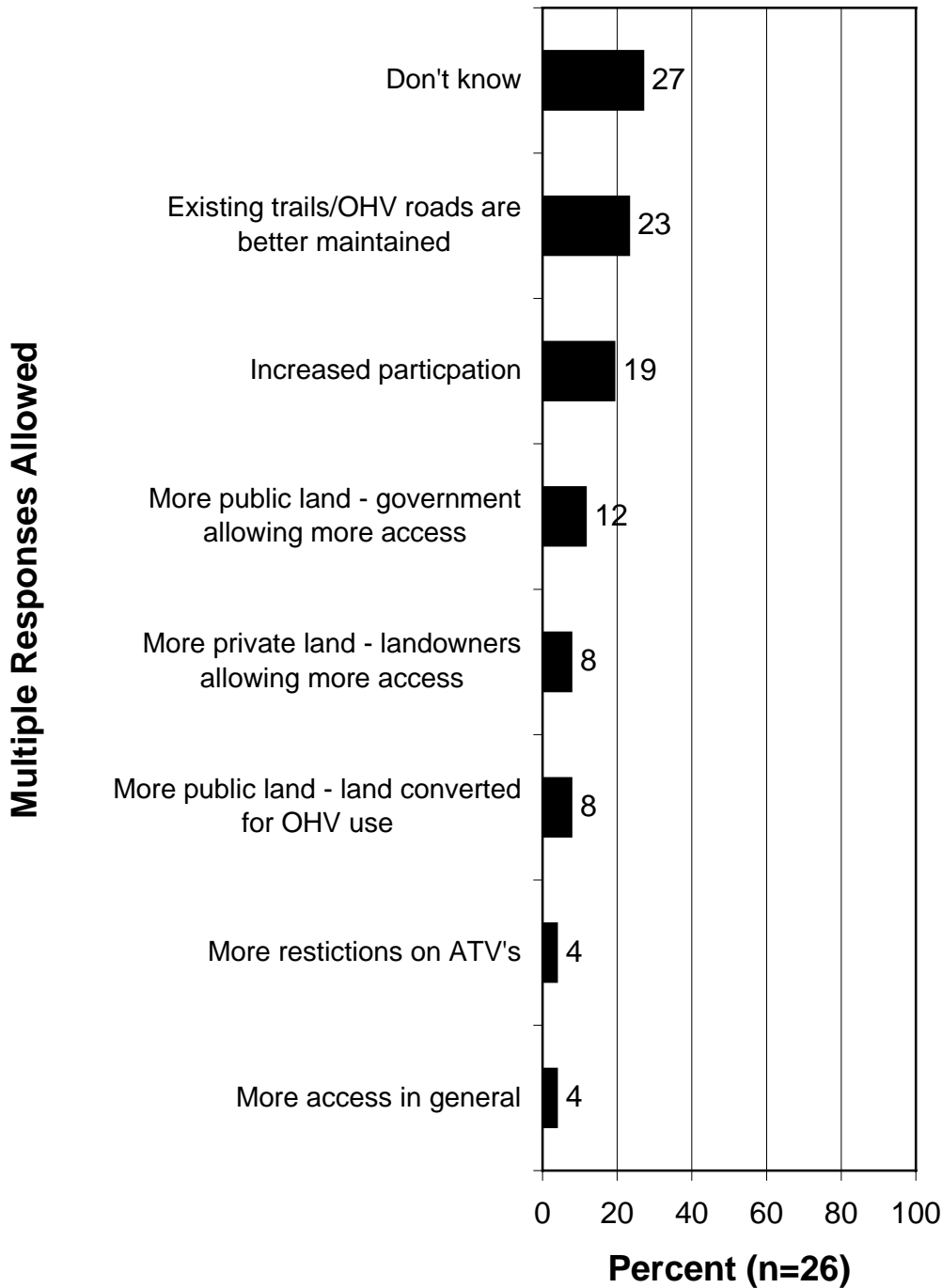


**Q34. Why do you think off-highway vehicle access has declined in the last five years?**

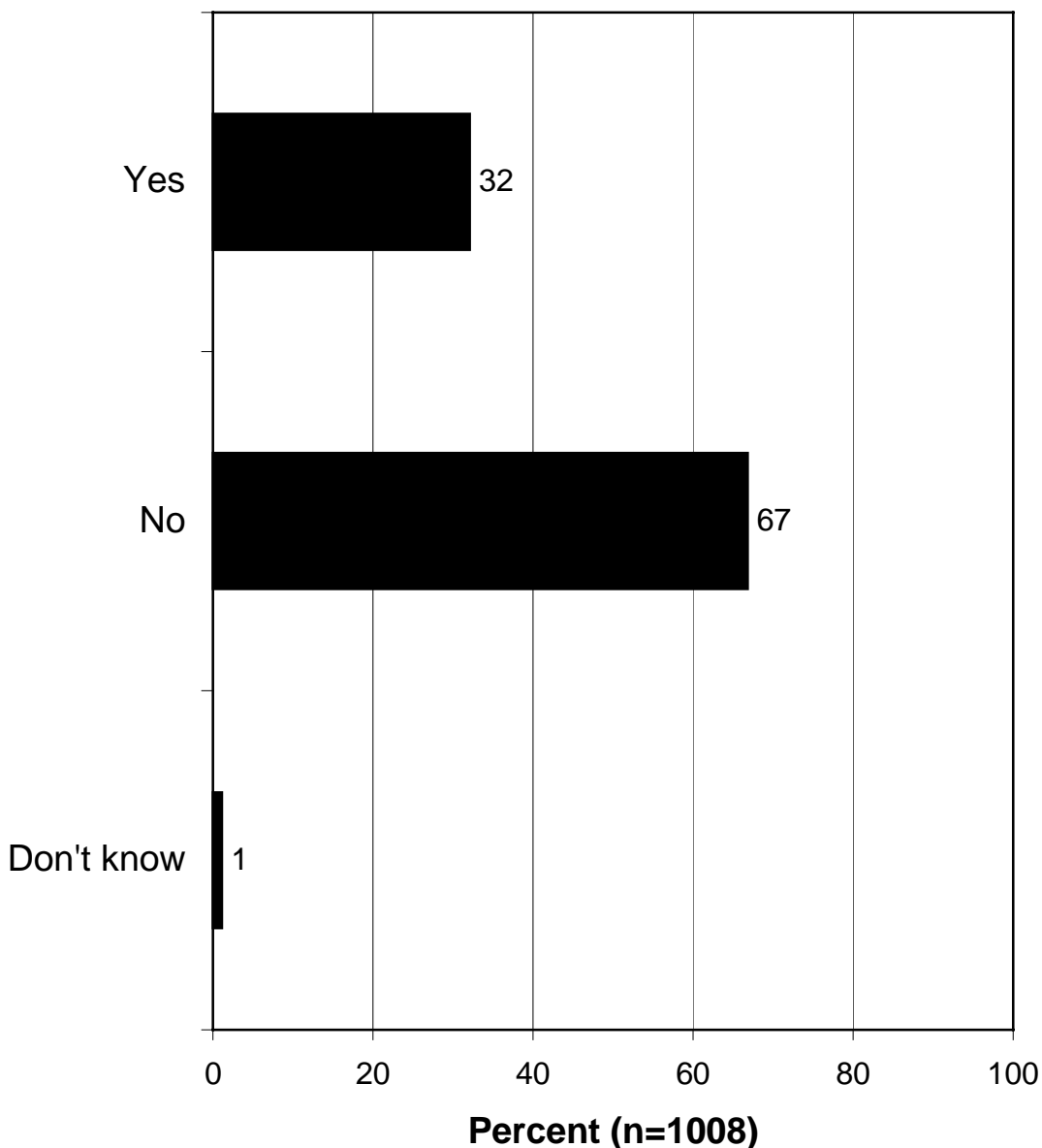
**(Asked of Participants that reported a decline in off-highway vehicle access)**



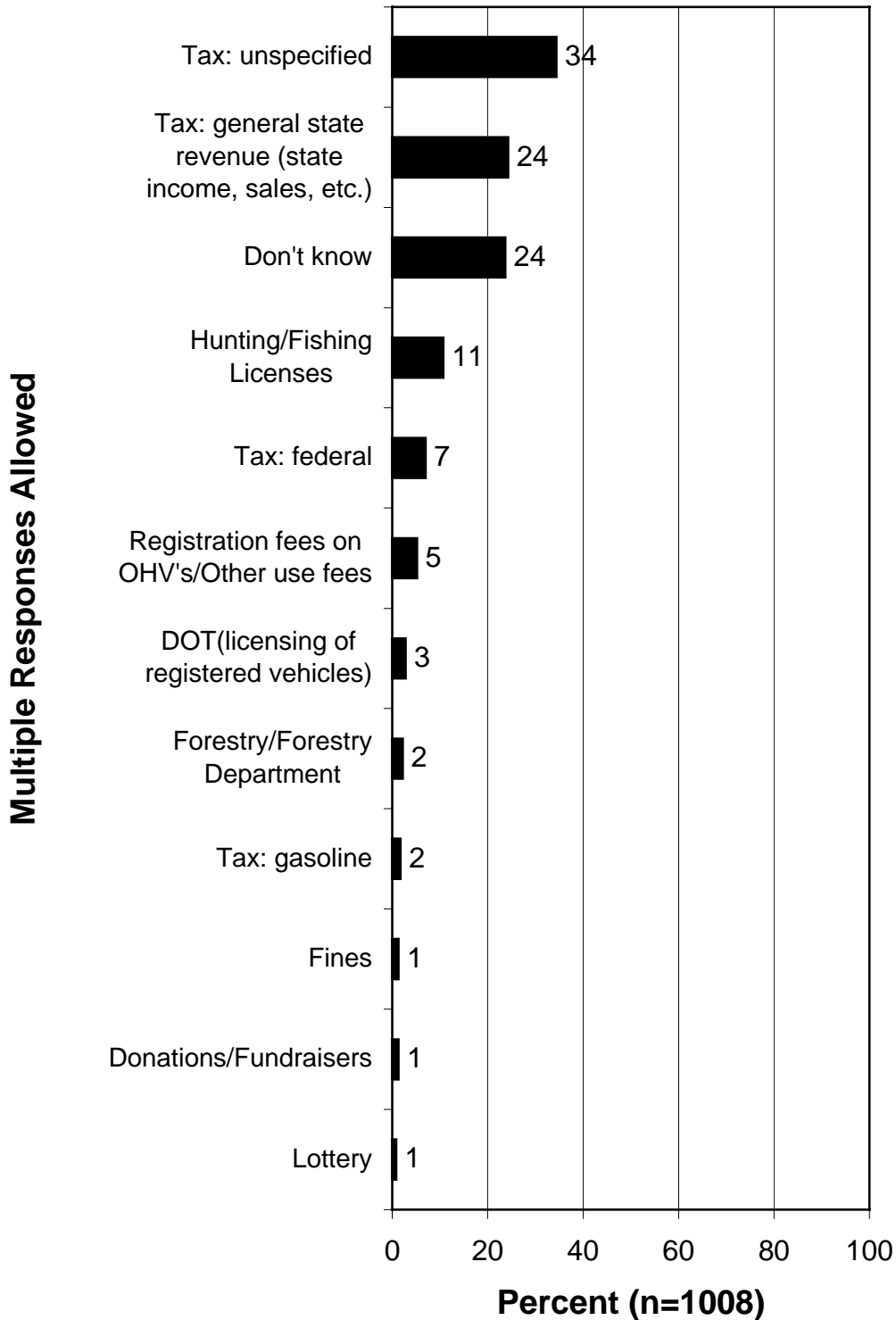
**Q37. Why do you think off-highway vehicle access has increased in the last five years?  
(Asked of Participants that reported an increase in off-highway vehicle access)**



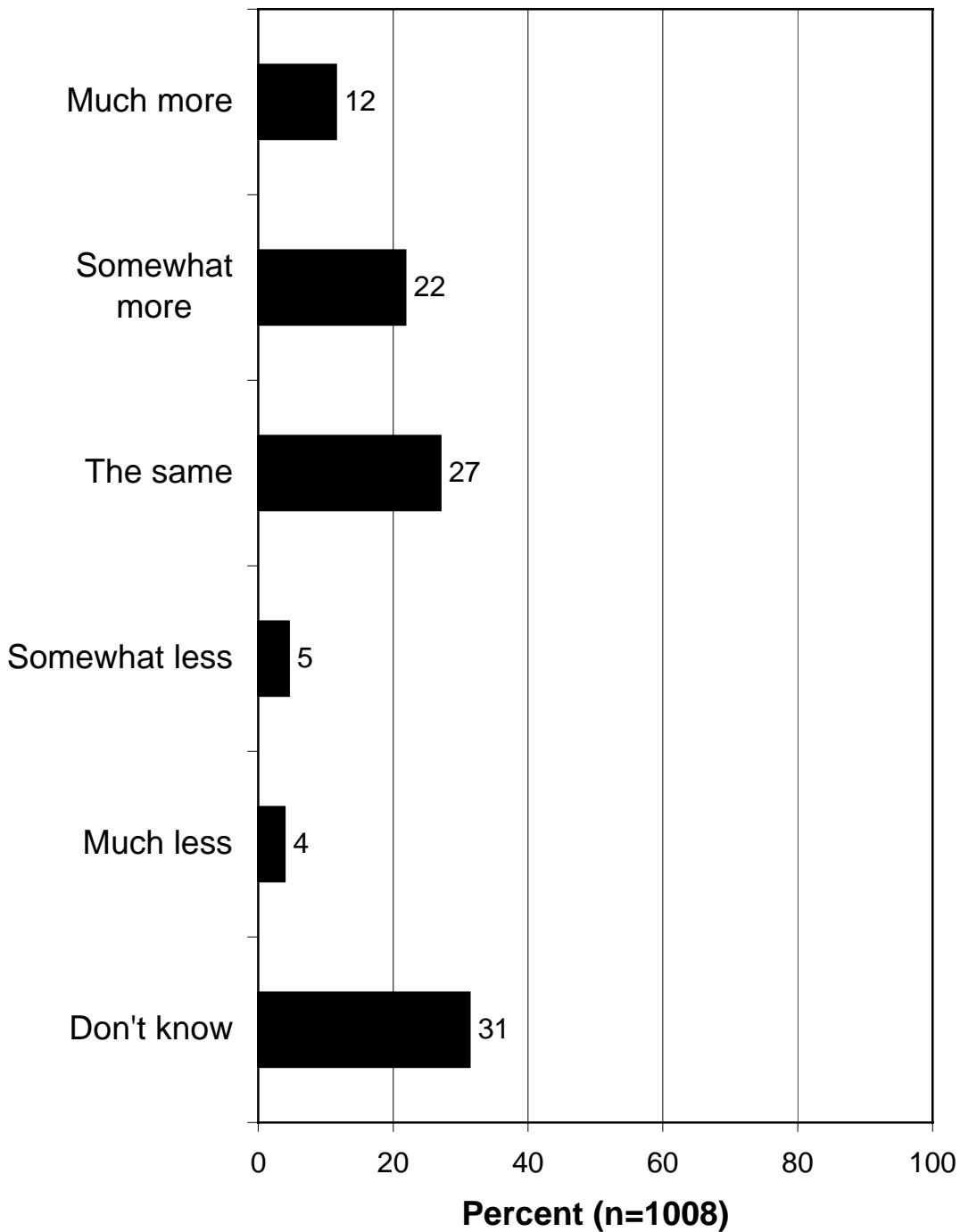
**Q39. The AZGFD has responsibility in managing OHV use in Arizona, including the enforcement of ORV laws and providing information on the activity to the public. Before this survey, were you aware that the AZGFD had these responsibilities?**



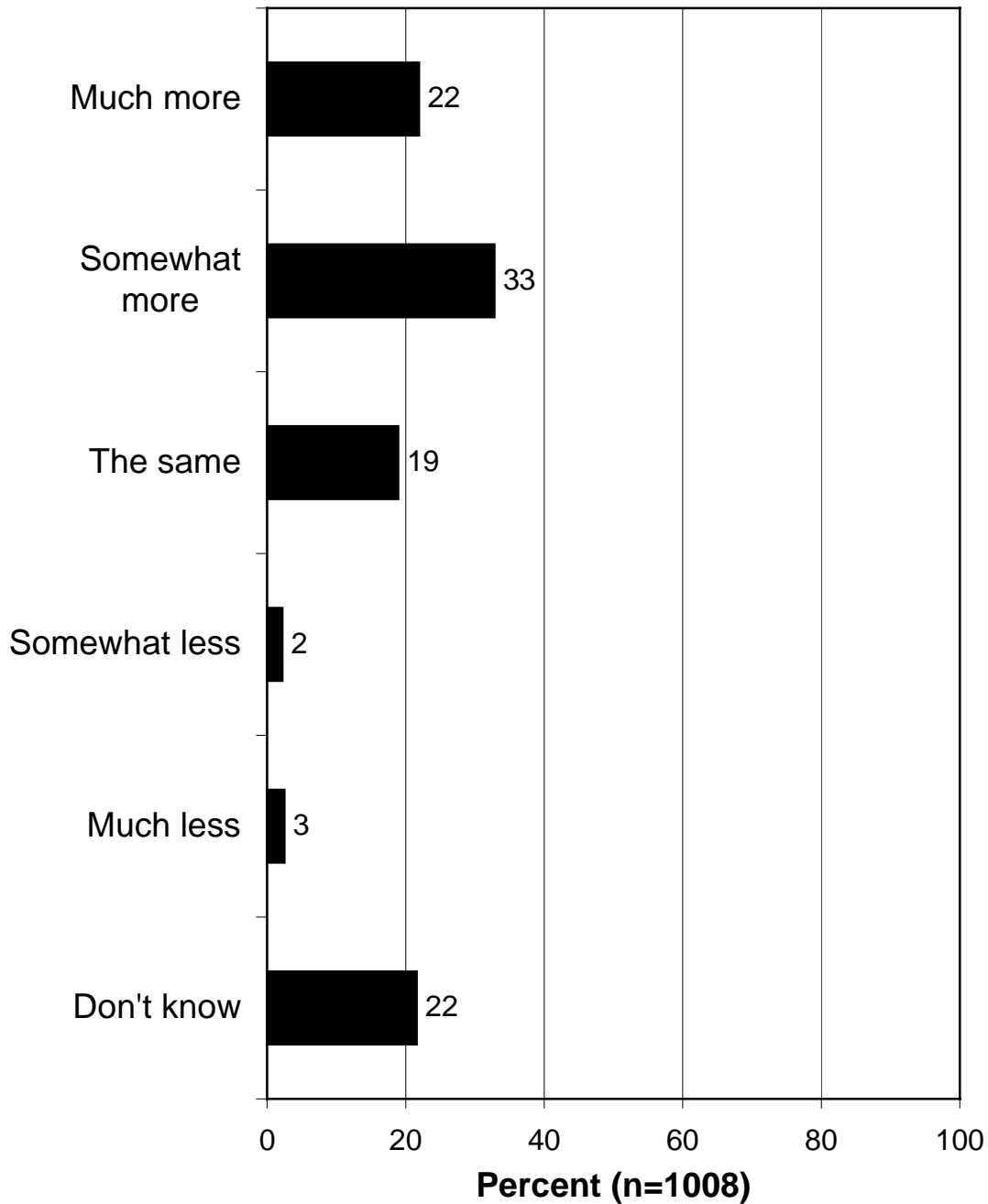
### Q41. Where do you think funds to manage off-highway vehicle use and recreation in Arizona come from?



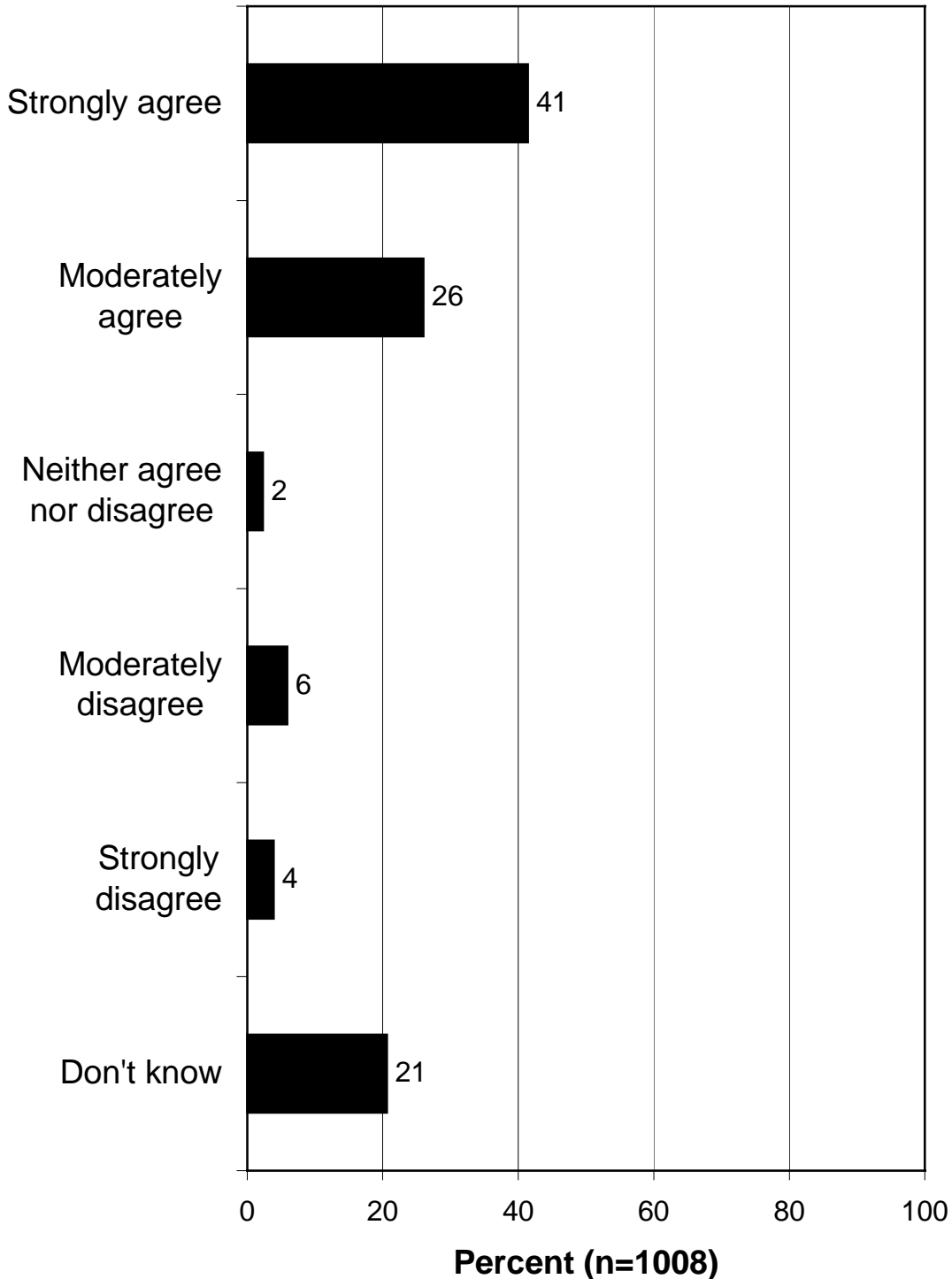
**Q43. Do you feel the Arizona Game and Fish Department should spend more, the same or less time and money enforcing off-highway vehicle laws?**



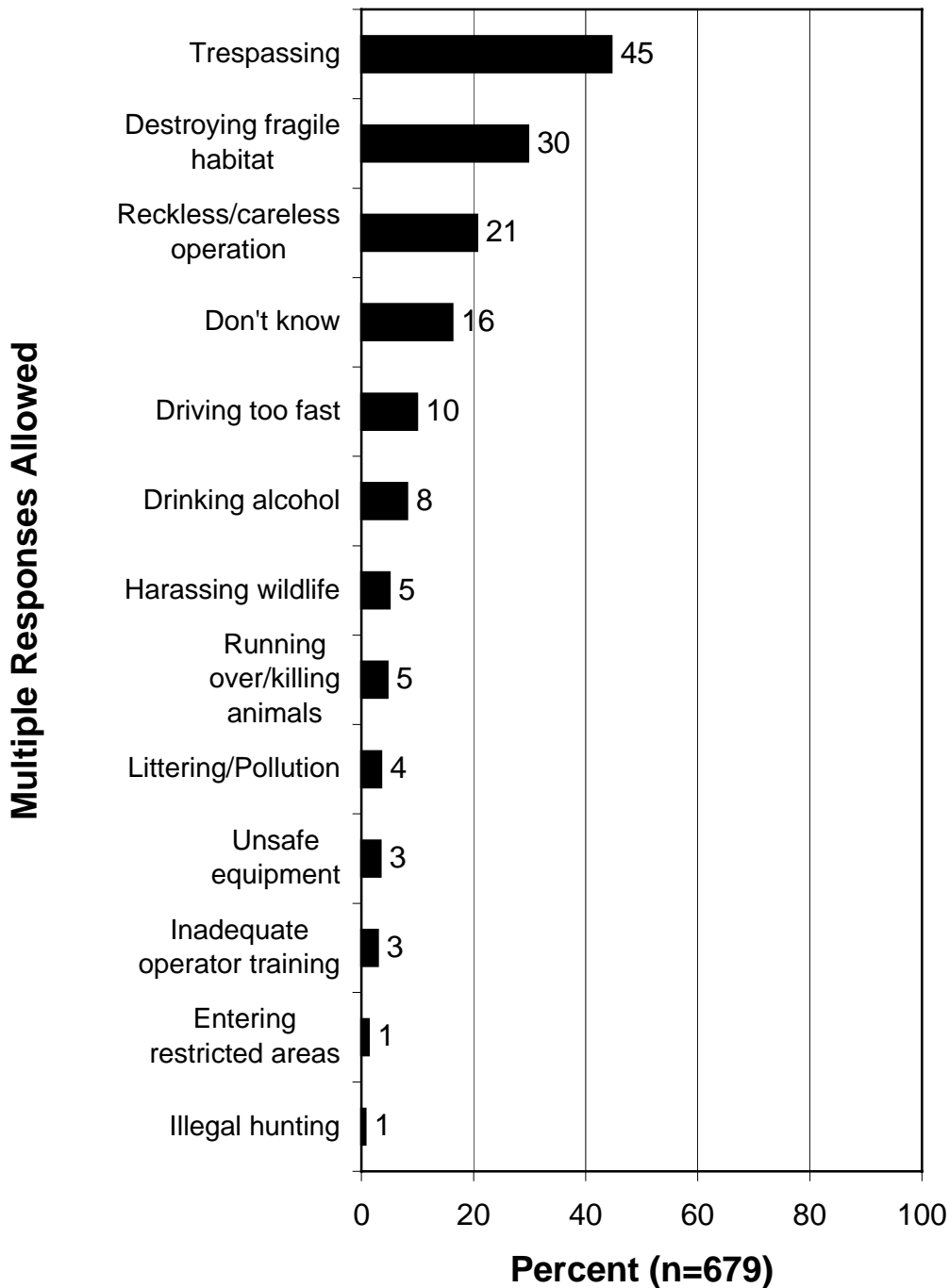
**Q44. Do you feel the Arizona Game and Fish Department should spend more, the same or less time and money informing and educating OHV participants about OHV rules and regulations?**



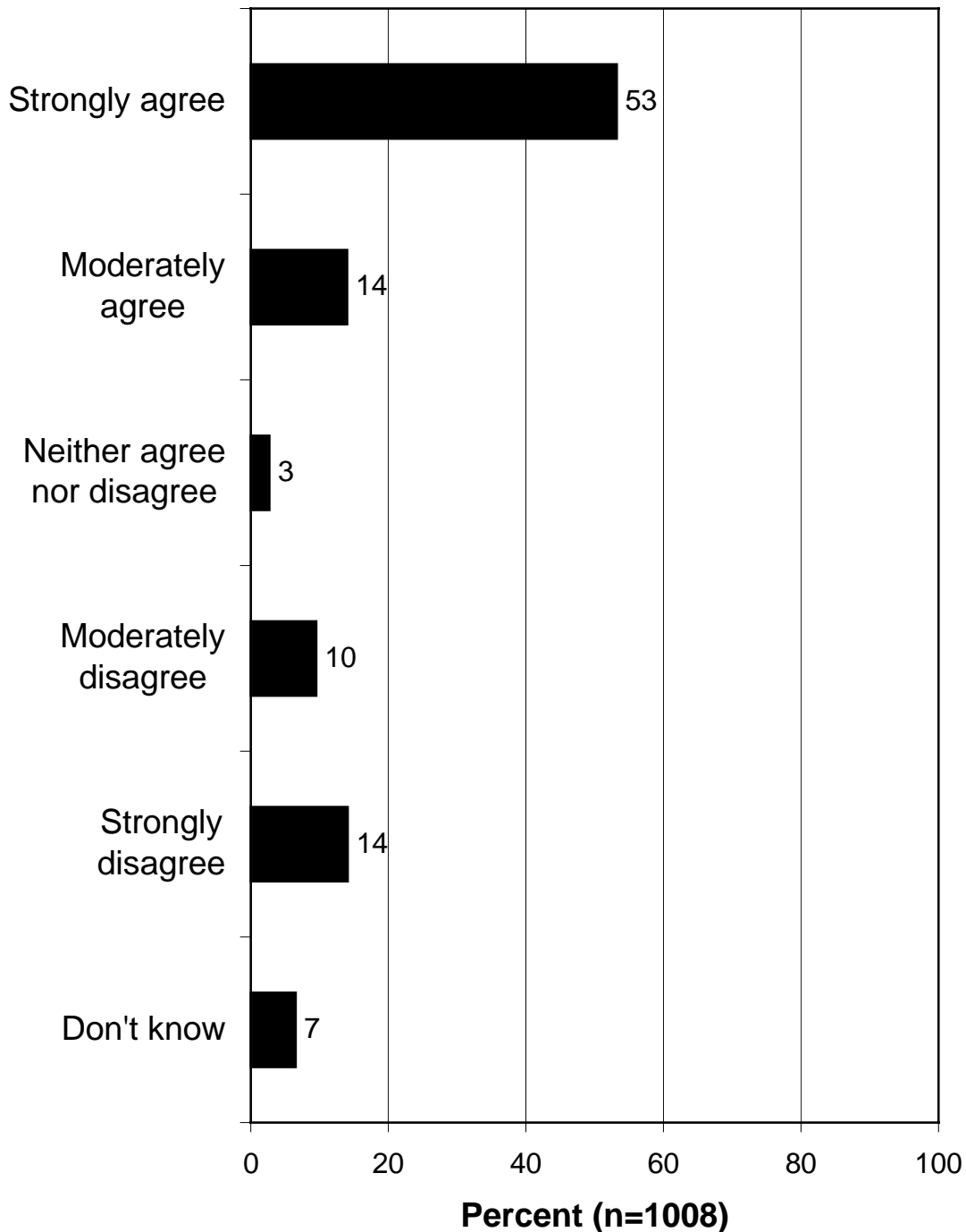
**Q45. Do you agree or disagree that a lot of off-highway vehicle participants violate off-highway vehicle laws?**



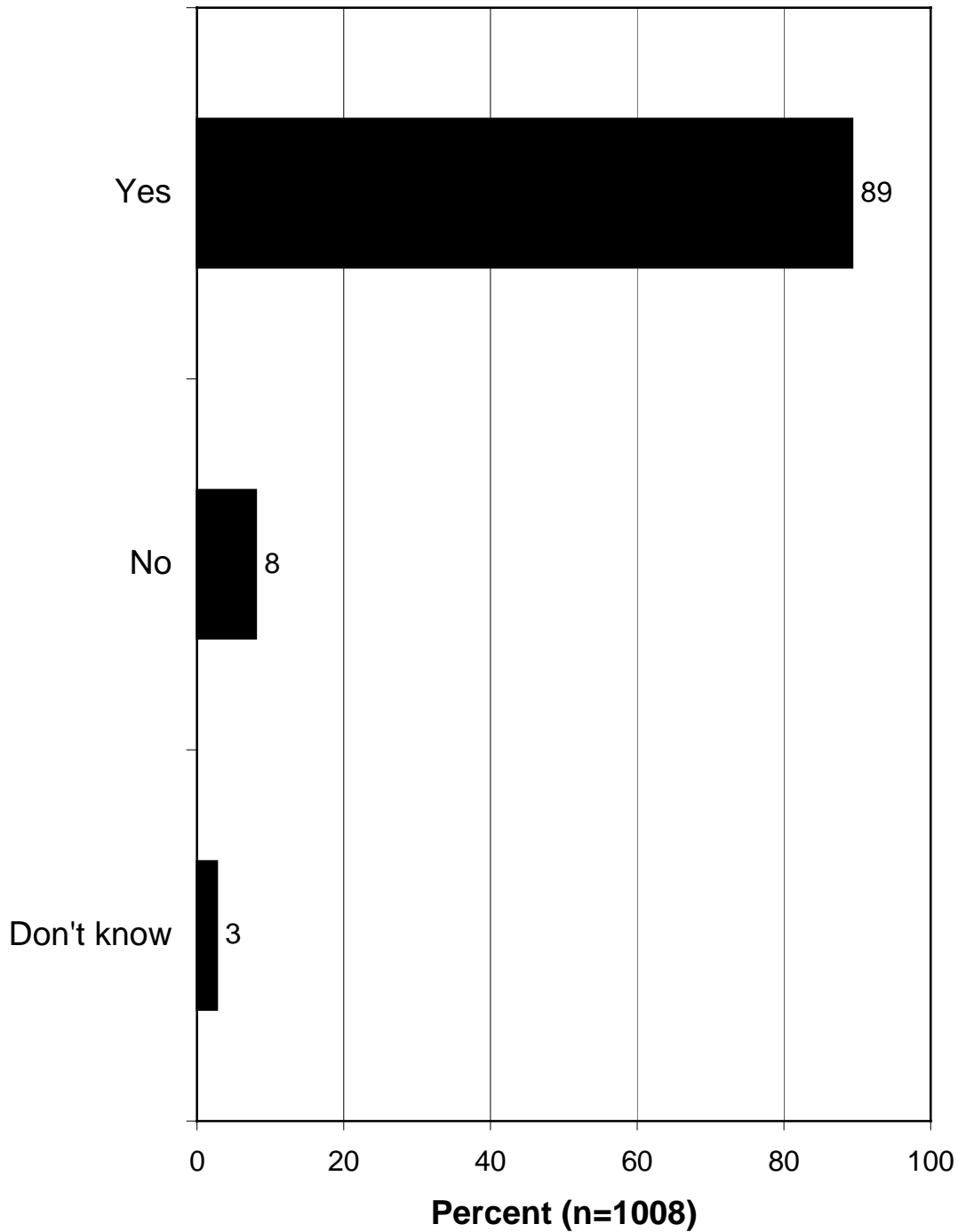
**Q47. Which laws do you think off-highway vehicle participants violate most often?  
(Asked of those who agreed that a lot of OHV Participants violate OHV laws)**



**Q49. Do you agree or disagree that people who operate off-highway vehicles in Arizona should be required to have licenses, just as automobile operators?**



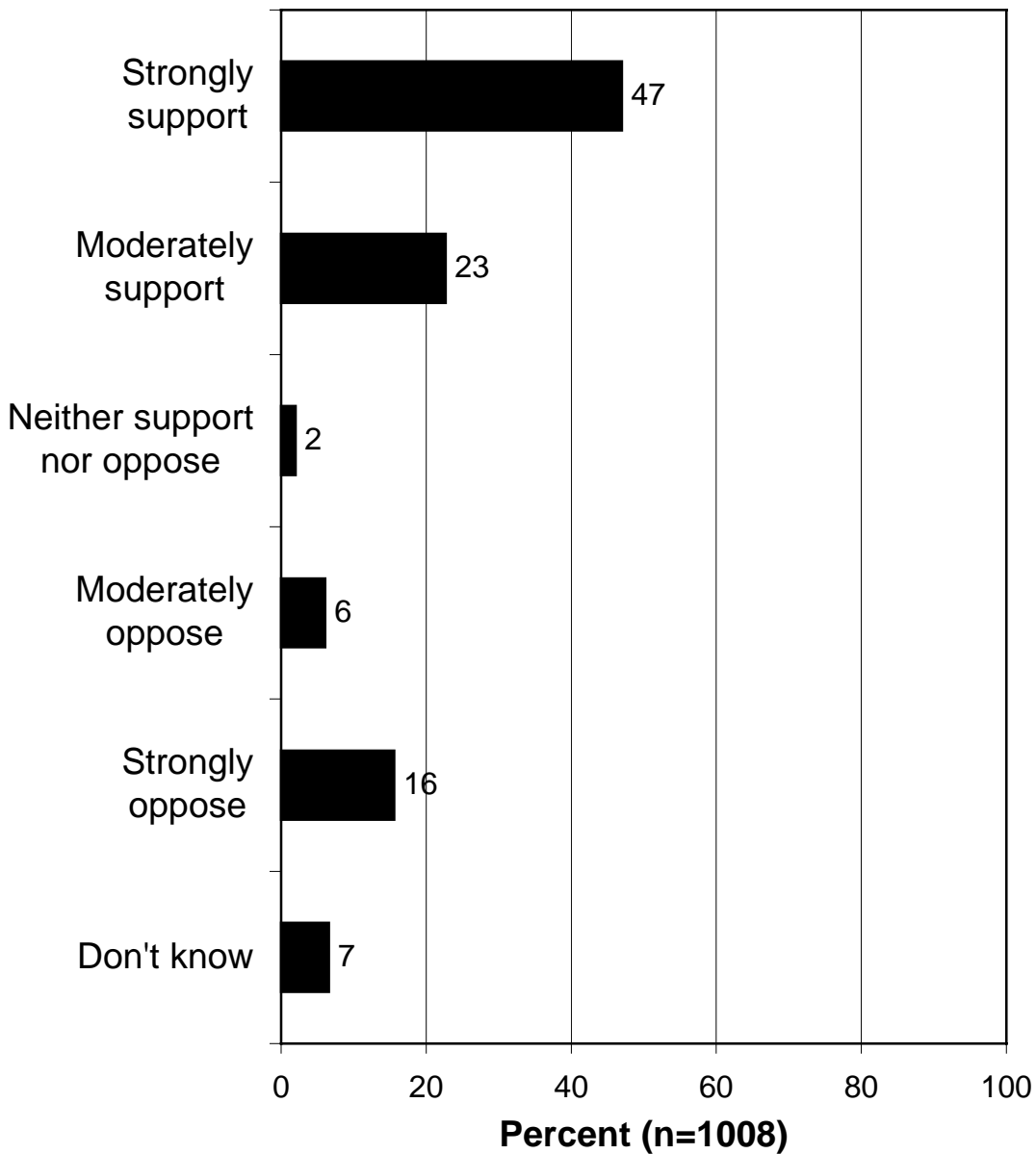
**Q50. Do you think there should be a minimum legal age to operate an off-highway vehicle unsupervised in Arizona?**



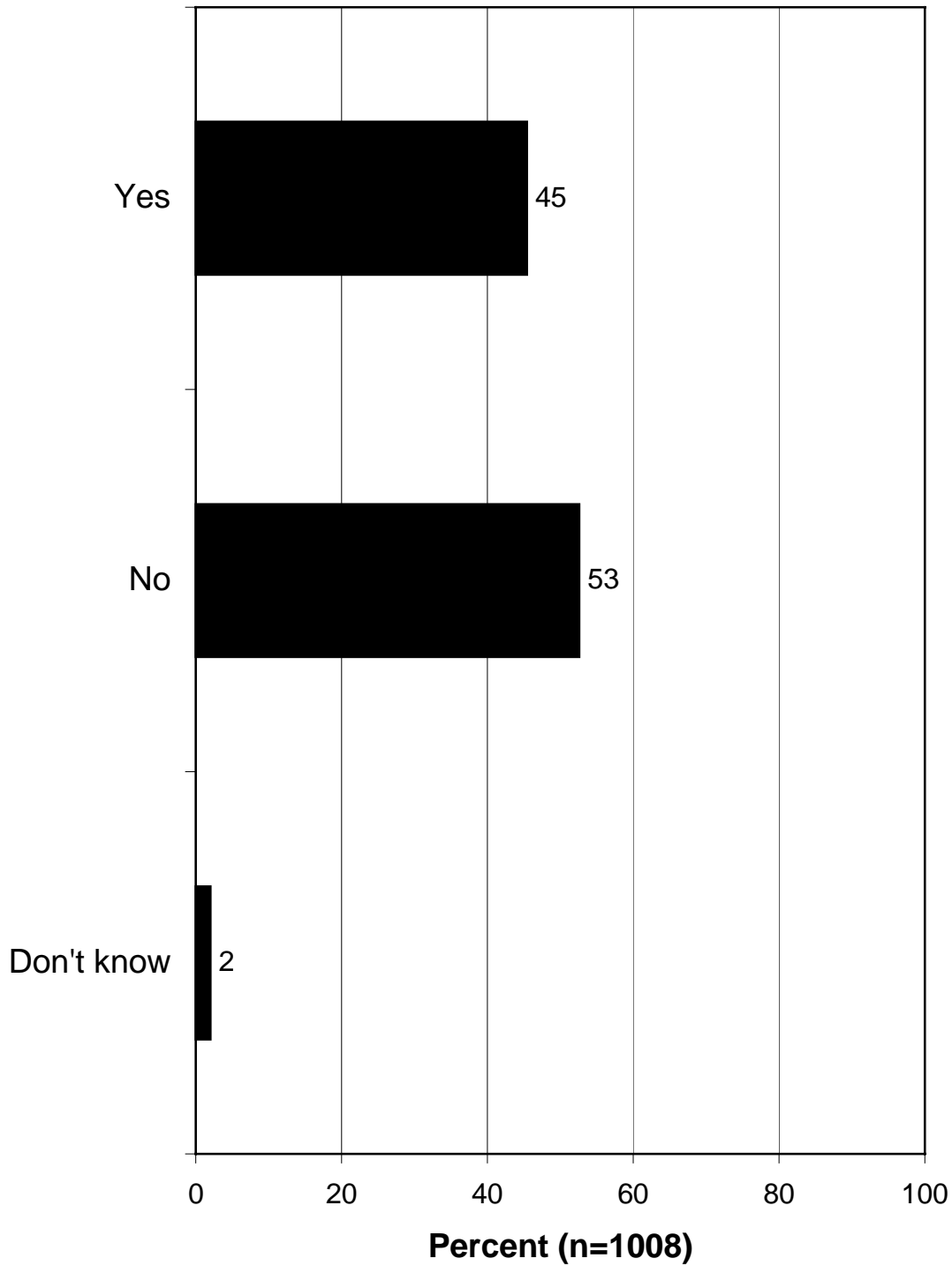
**Q51. What do you think the minimum legal age should be to operate an off-highway vehicle unsupervised in Arizona?**



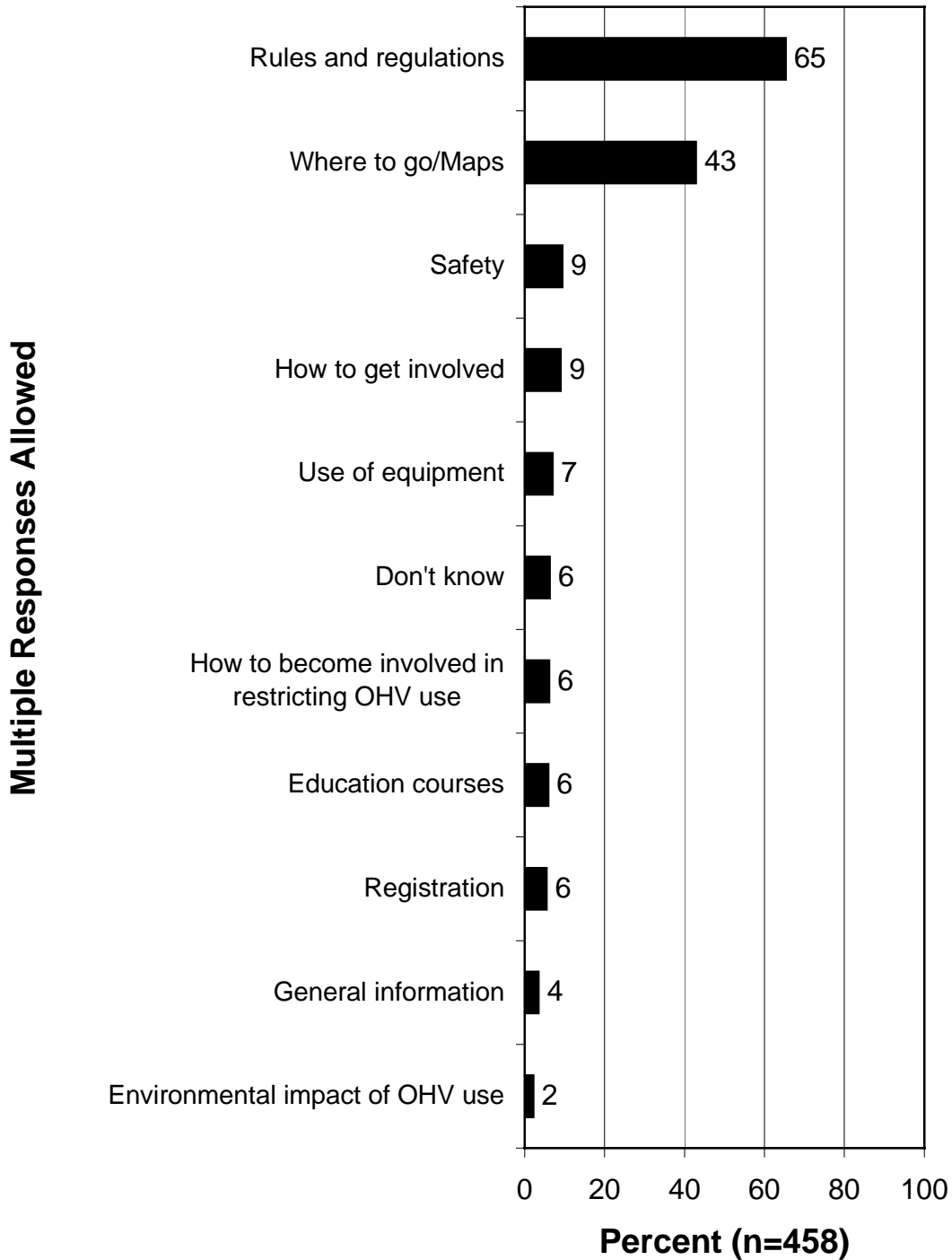
**Q52. Would you support or oppose the idea of a mandatory registration fee for off-highway vehicles if the registration fees were used to increase enforcement of OHV laws and provided increased information regarding off-highway rules and activities?**



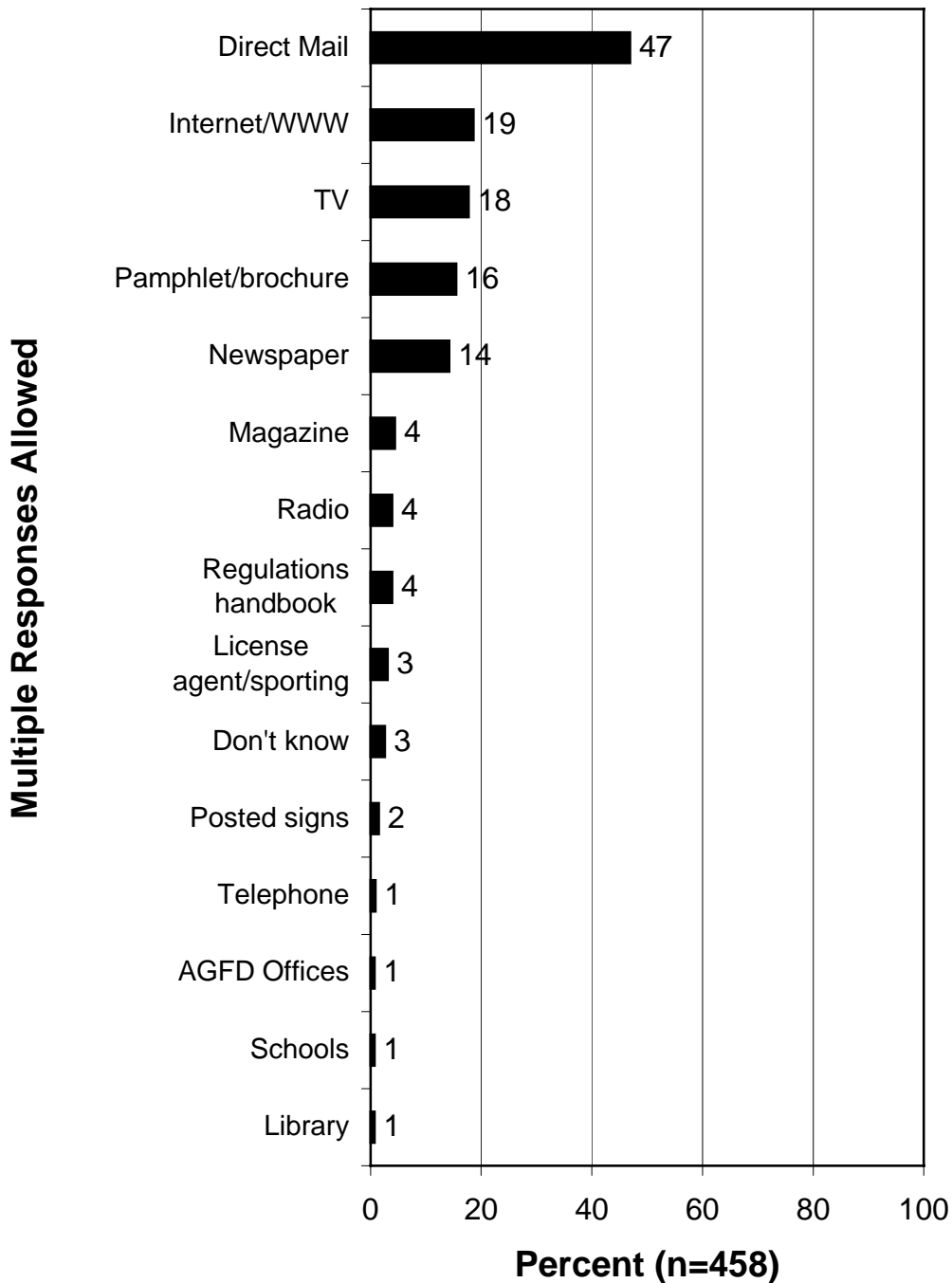
**Q53. Would you be interested in more information on off-highway vehicle use in Arizona?**



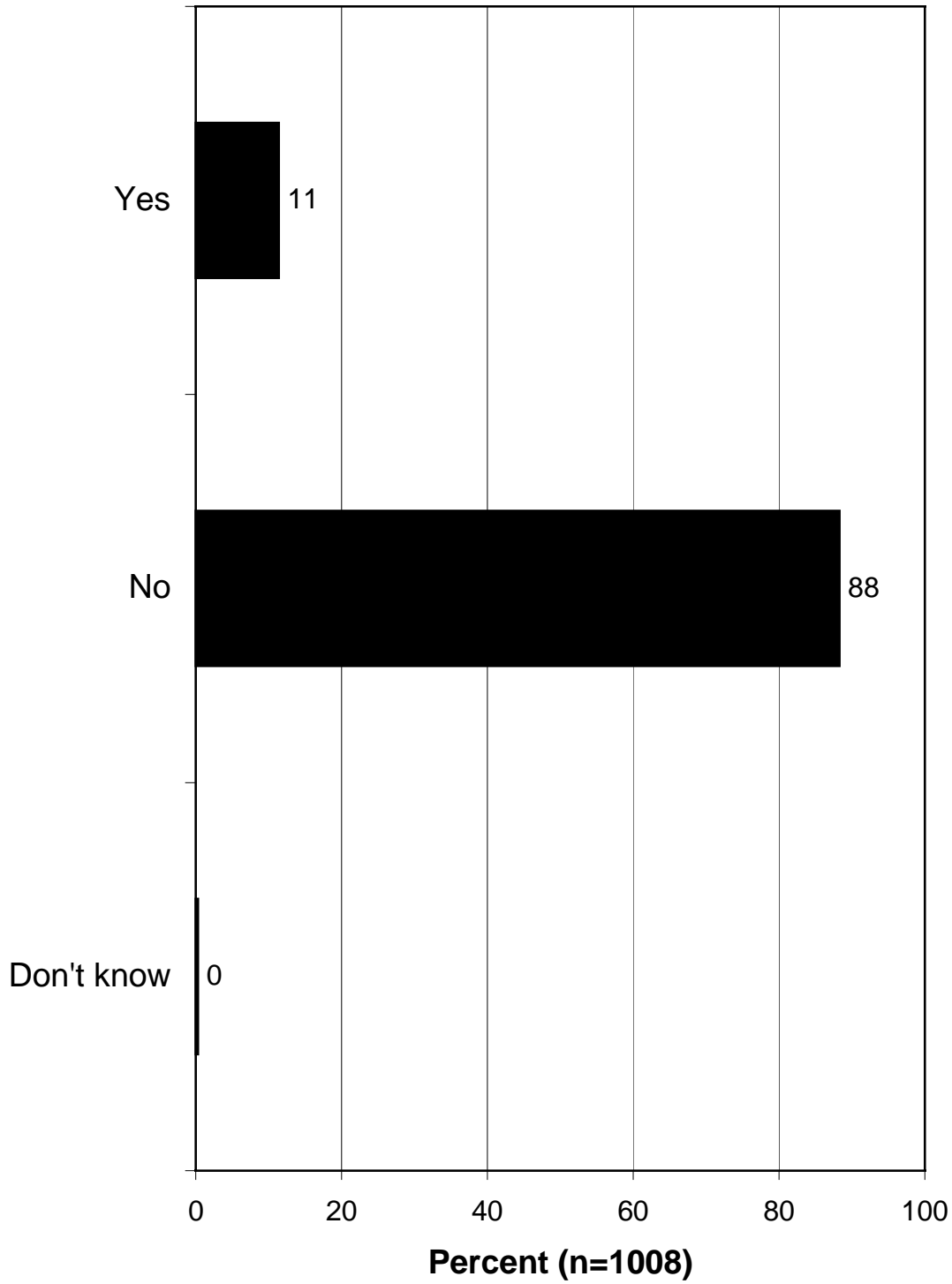
**Q55. What types of information would you be interested in?**  
**(Asked of those that reported interest in more information on OHV use in AZ)**



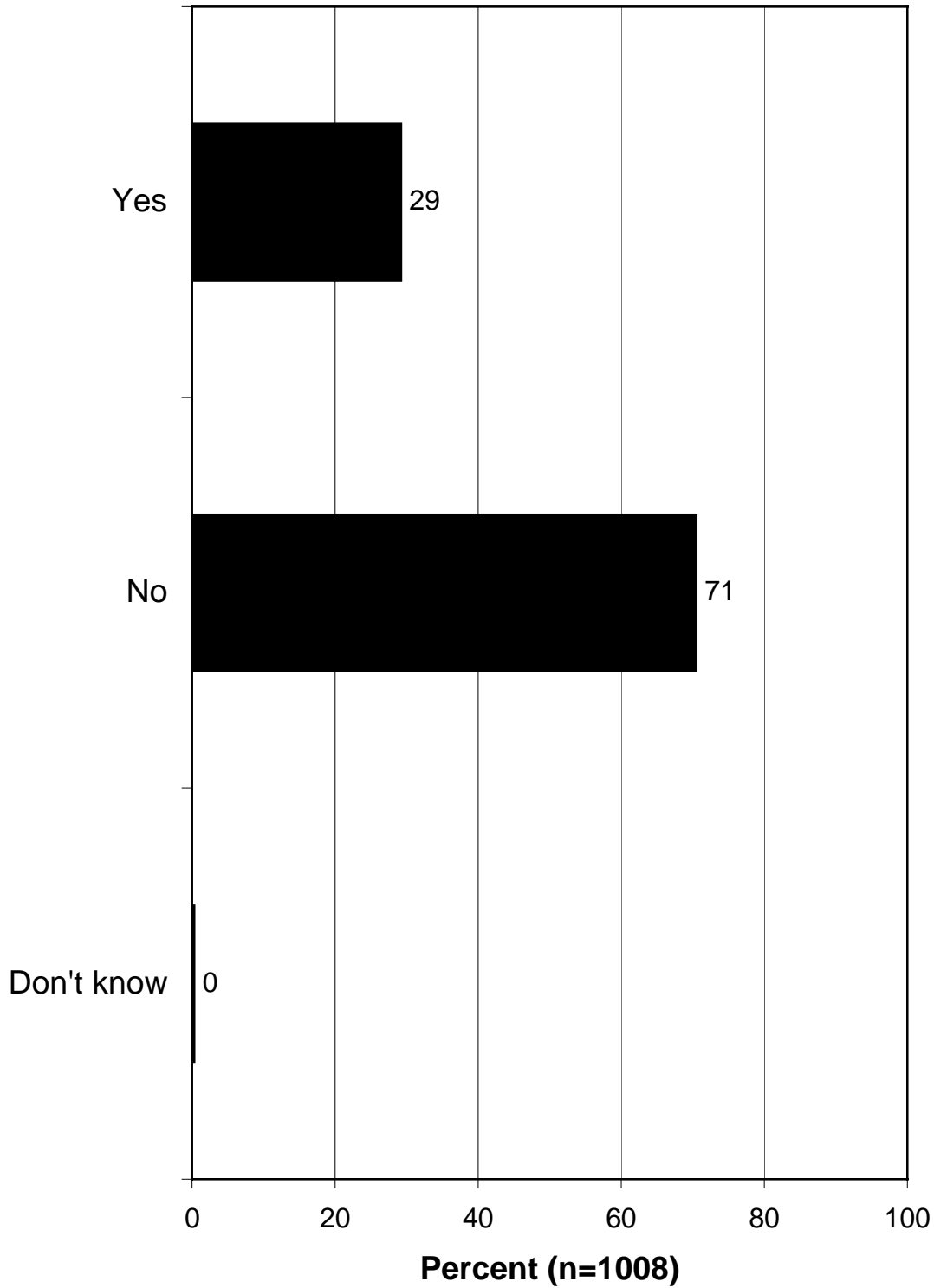
**Q58. What are the best ways to provide you with information on off-highway vehicle use and activities?  
(Asked of those that reported interest in more information on OHV use in AZ)**



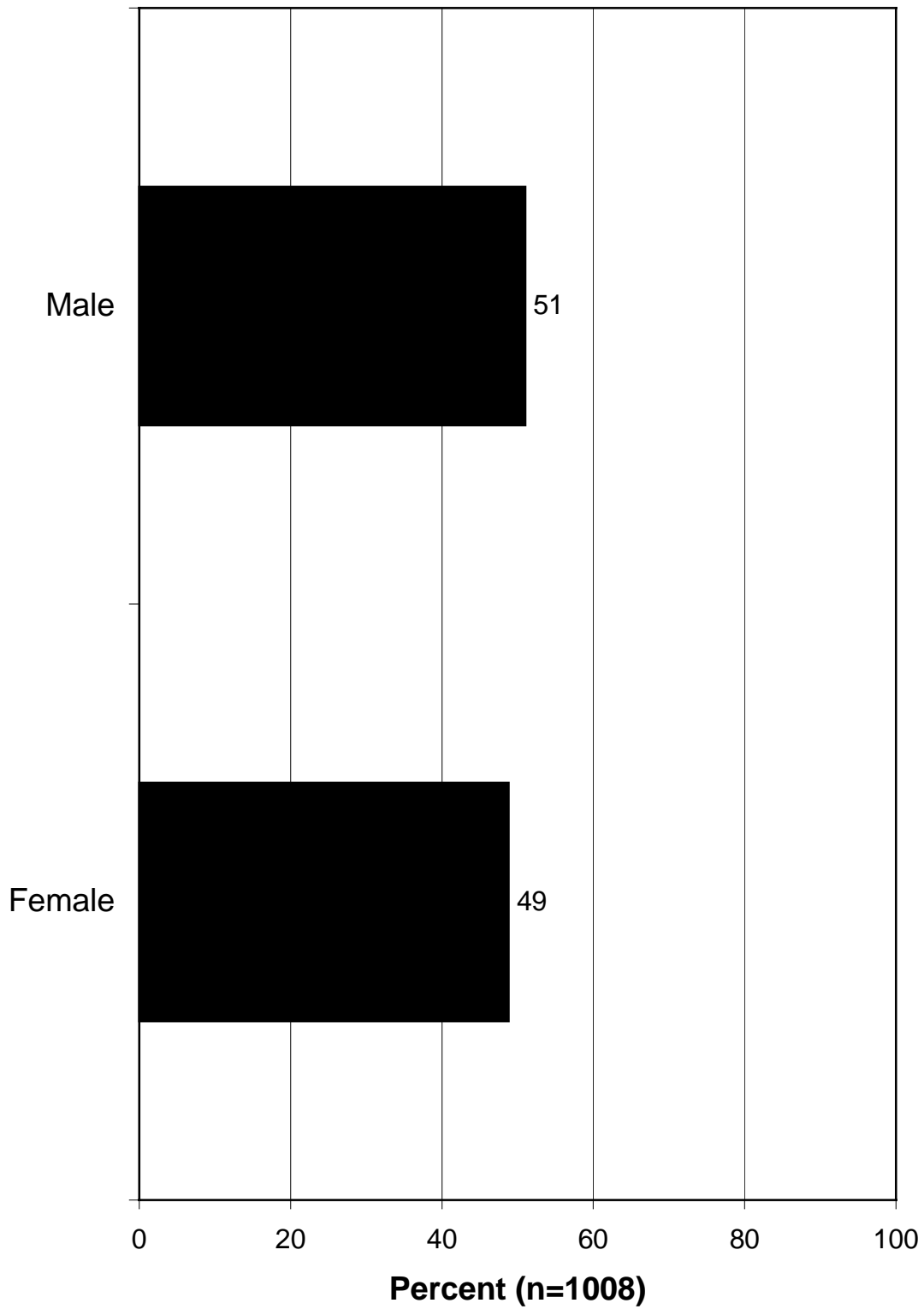
### Q61. Have you hunted in Arizona in the past two years?



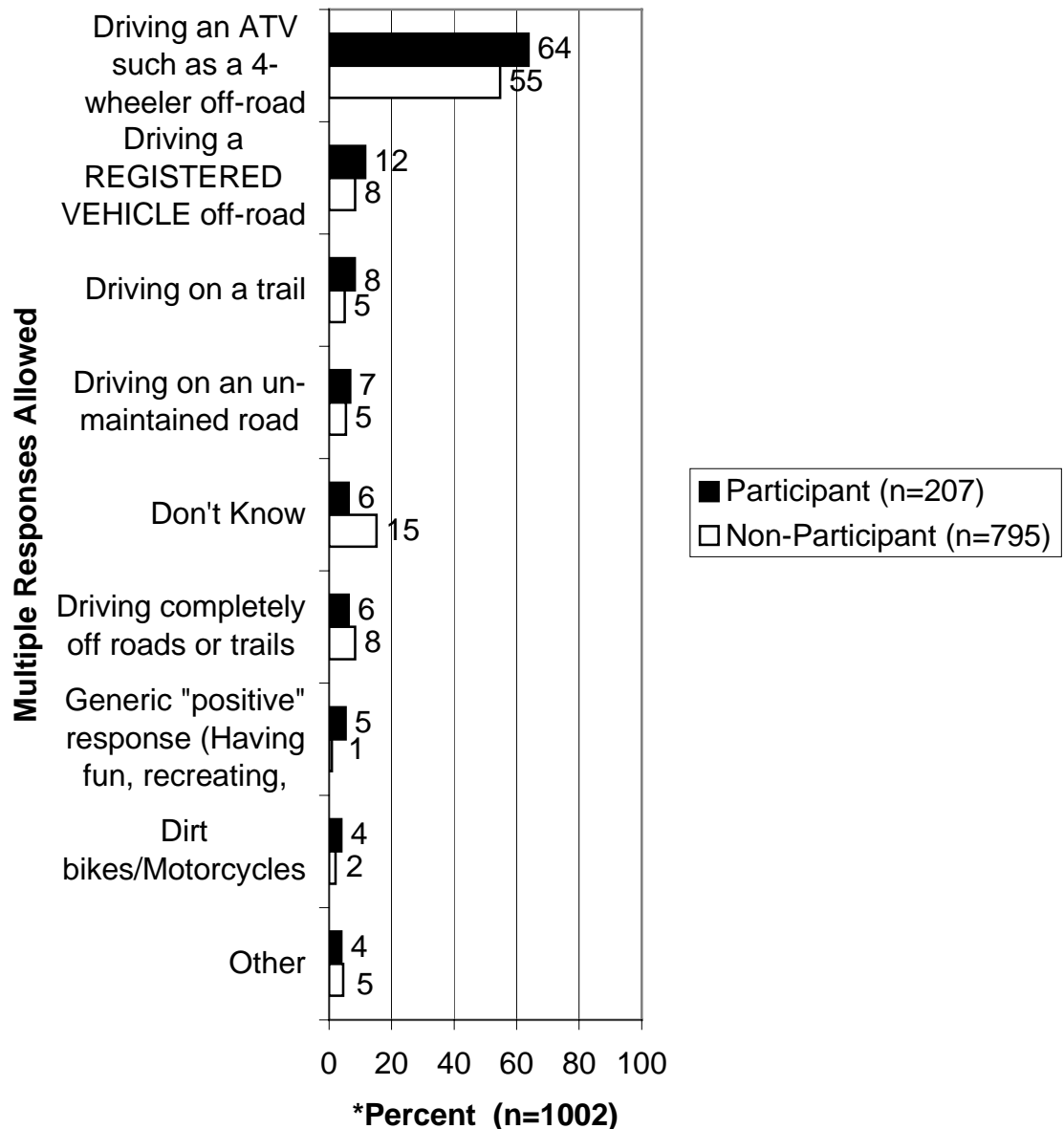
### Q62. Have you fished in Arizona in the past two years?



**Q65. Observed gender.**

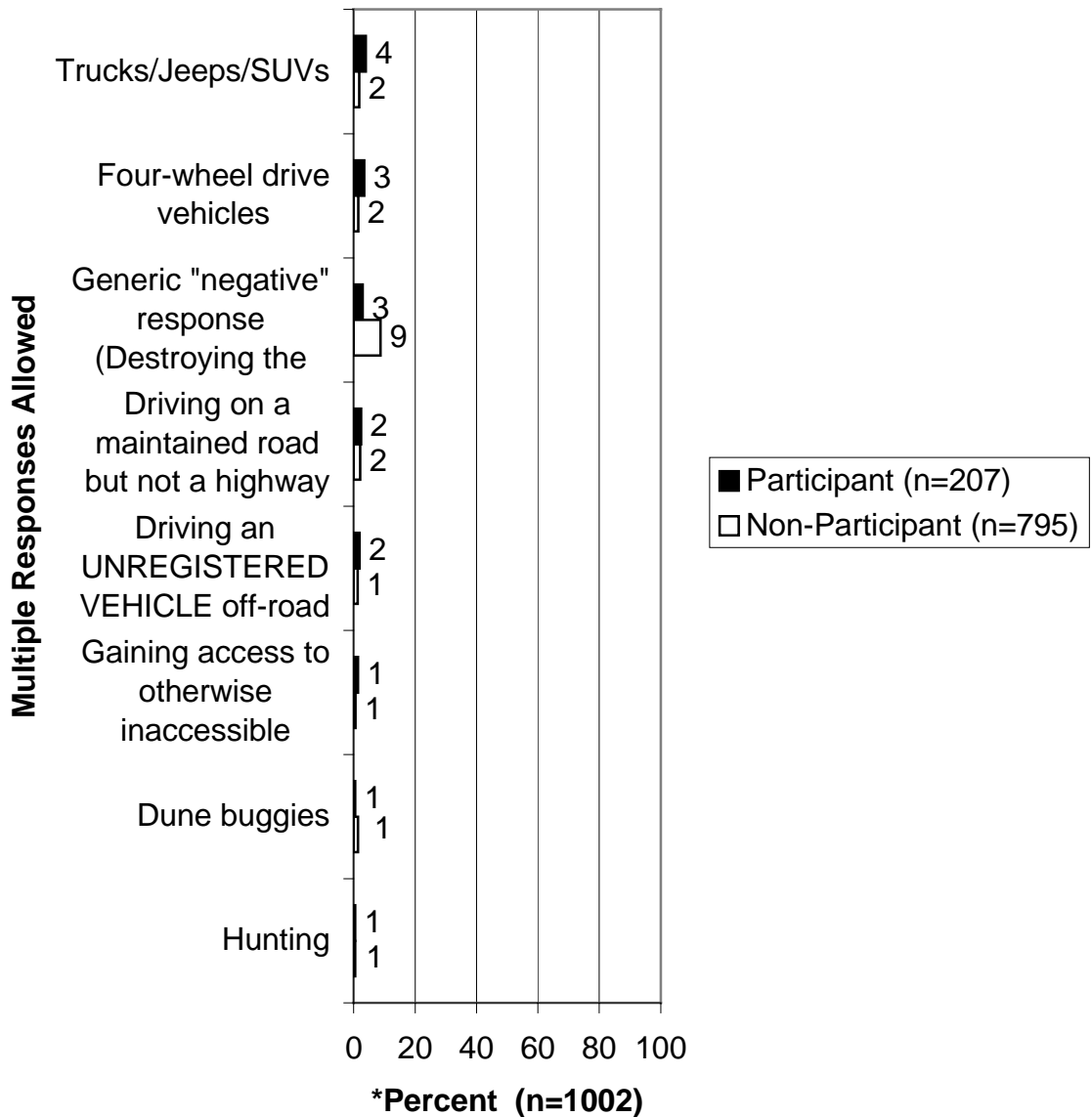


**Q6. When you hear the terms "off-highway vehicle" and "off-highway vehicle activities," what do you think of? by Q13. Off-highway activity participation.**



\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

**Q6. When you hear the terms "off-highway vehicle" and "off-highway vehicle activities," what do you think of? by Q13. Off-highway activity participation.  
(Continued...)**



\*Percent (n=1002)  
\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

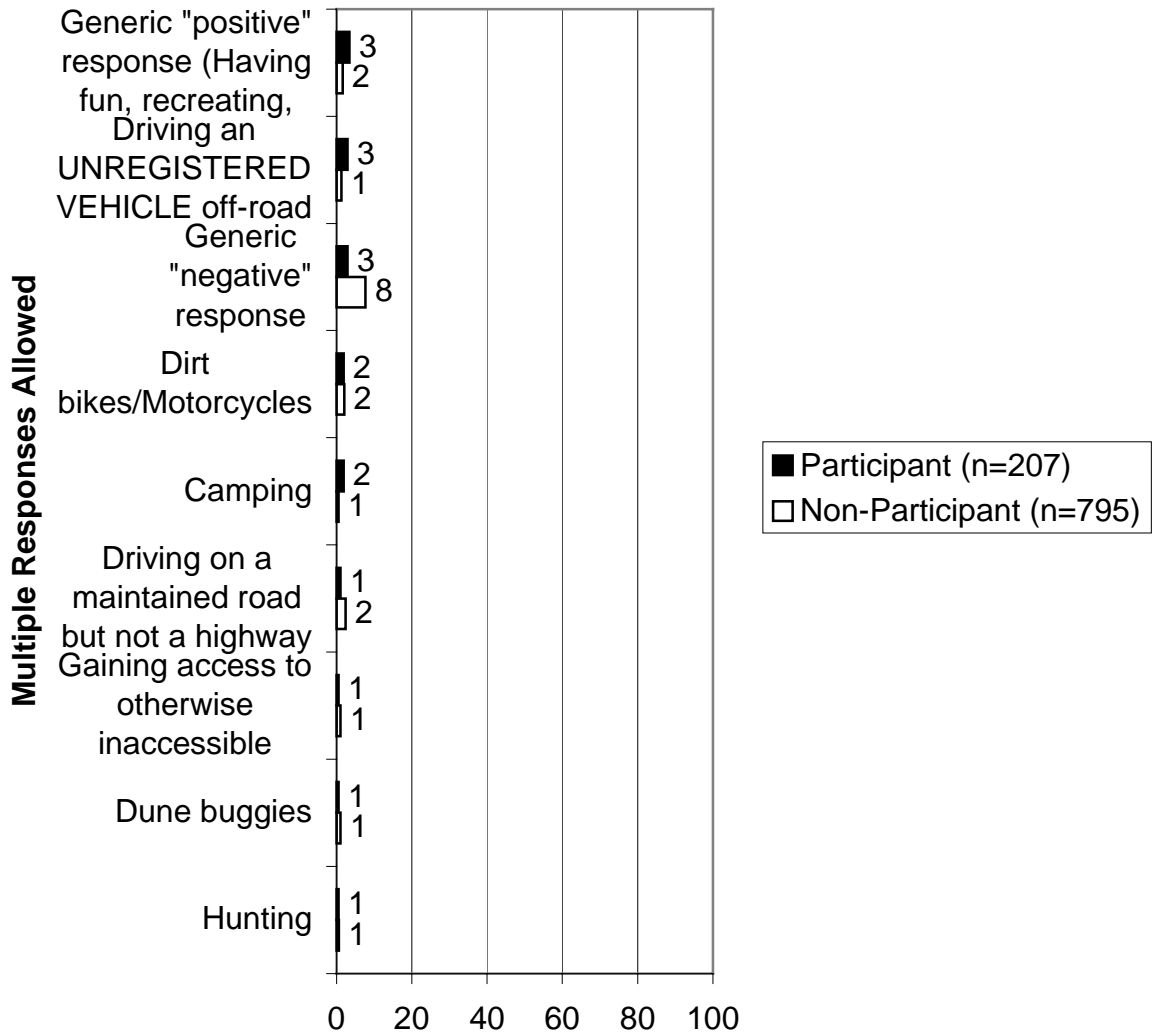
**Q9. When you hear the terms "off-road vehicle" and "off-road vehicle activities," what do you think of? by Q13. Off-highway activity participation.**



**\*Percent (n=1002)**

\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

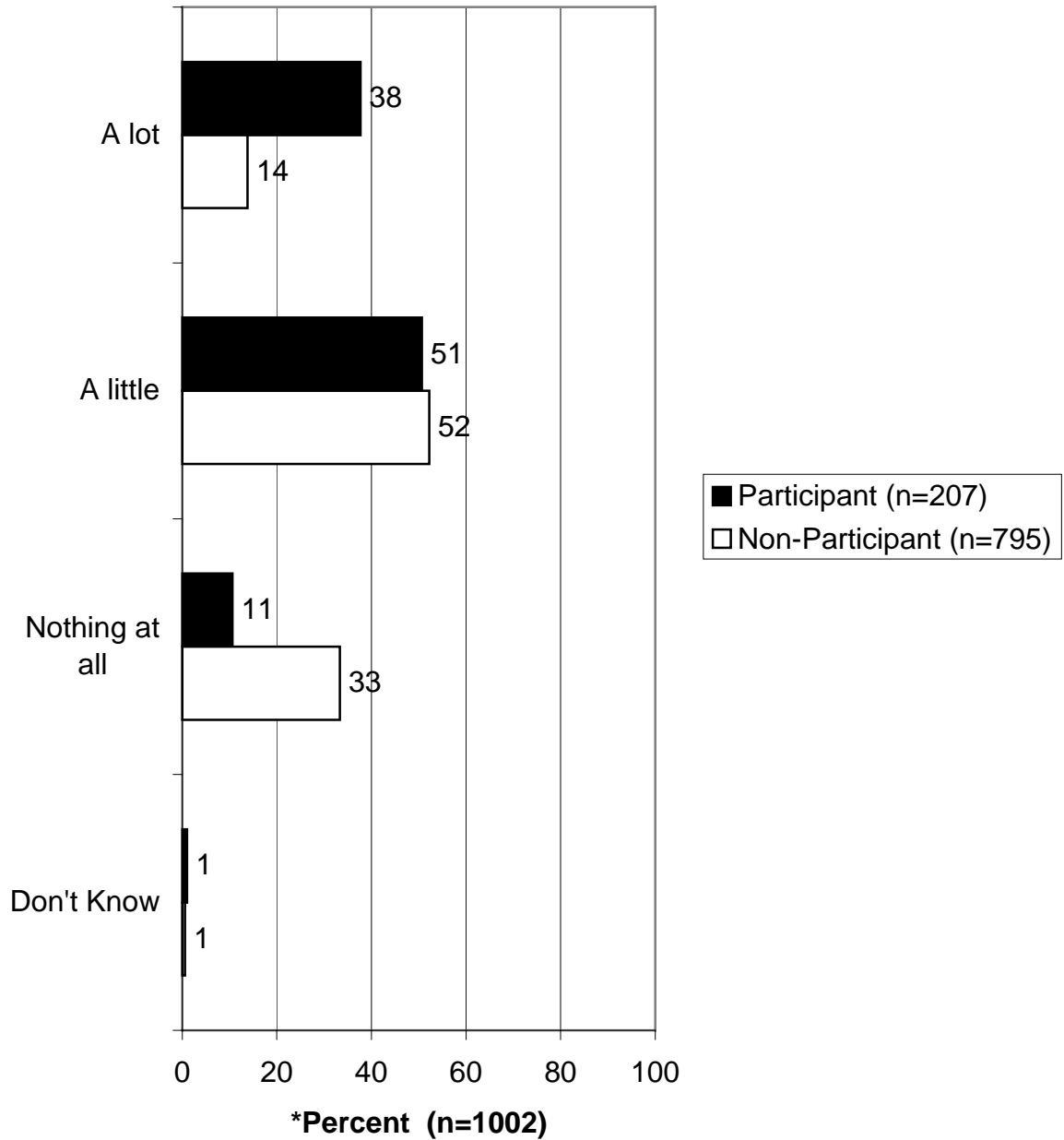
**Q9. When you hear the terms "off-road vehicle" and "off-road vehicle activities," what do you think of? by Q13. Off-highway activity participation. (Continued...)**



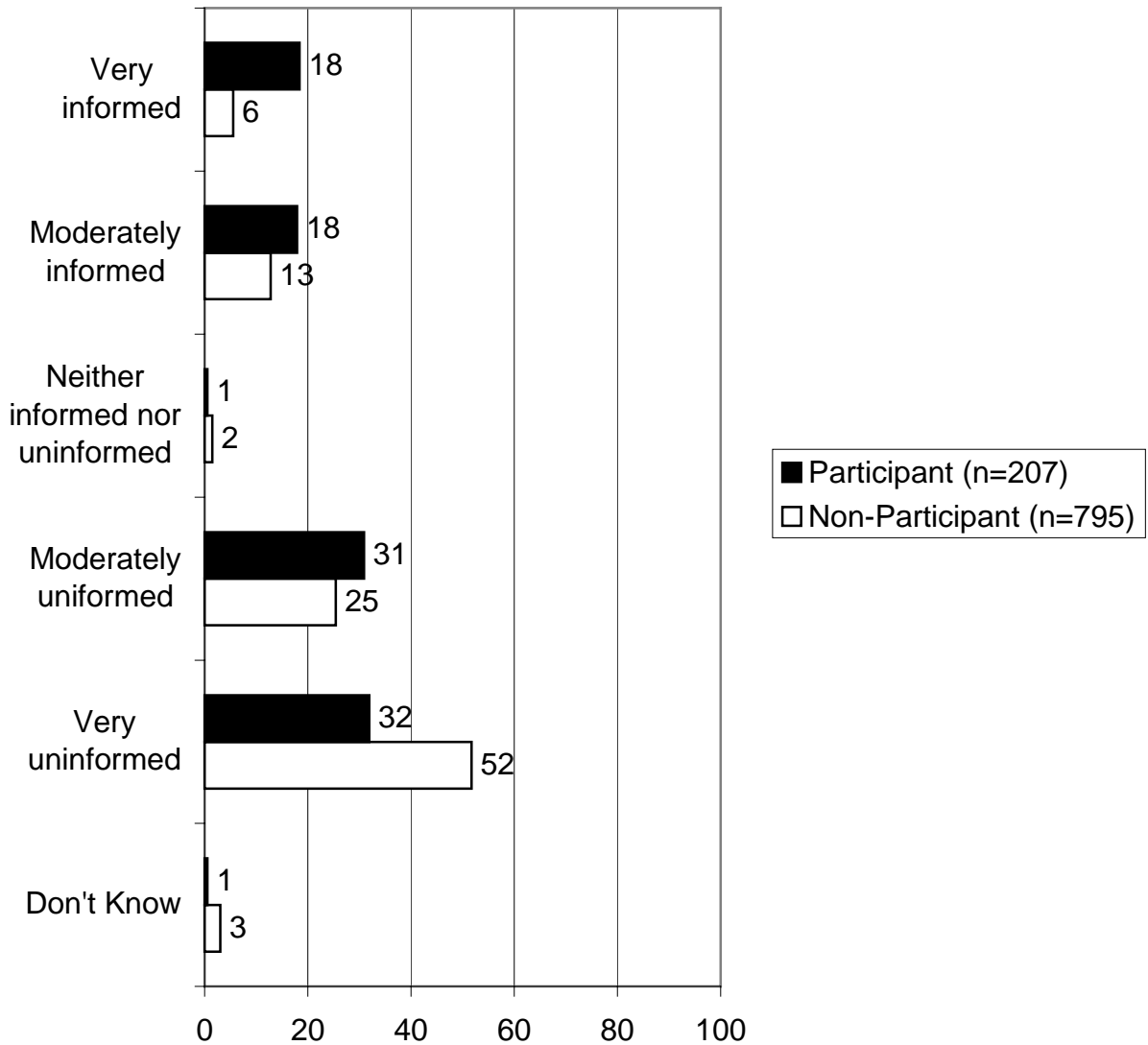
**\*Percent (n=1002)**

\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

**Q11. How much have you heard about off-highway vehicle activities in Arizona over the past two years...? by Q13. Off-highway activity participation.**



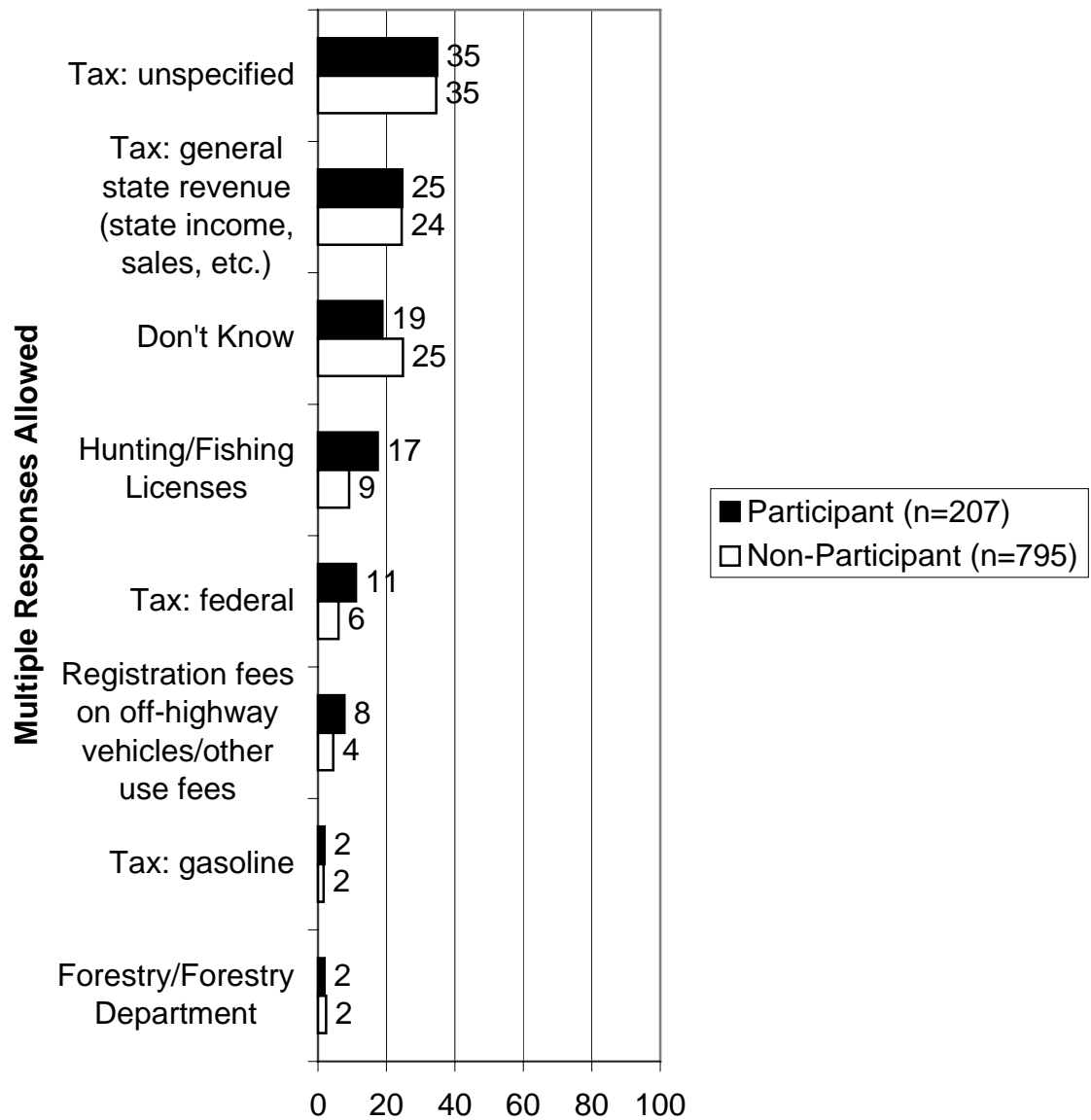
**Q12. Would you say you feel informed or uninformed about the laws and regulations concerning off-highway and off-road use in Arizona? by Q13. Off-highway activity participation.**



**\*Percent (n=1002)**

\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

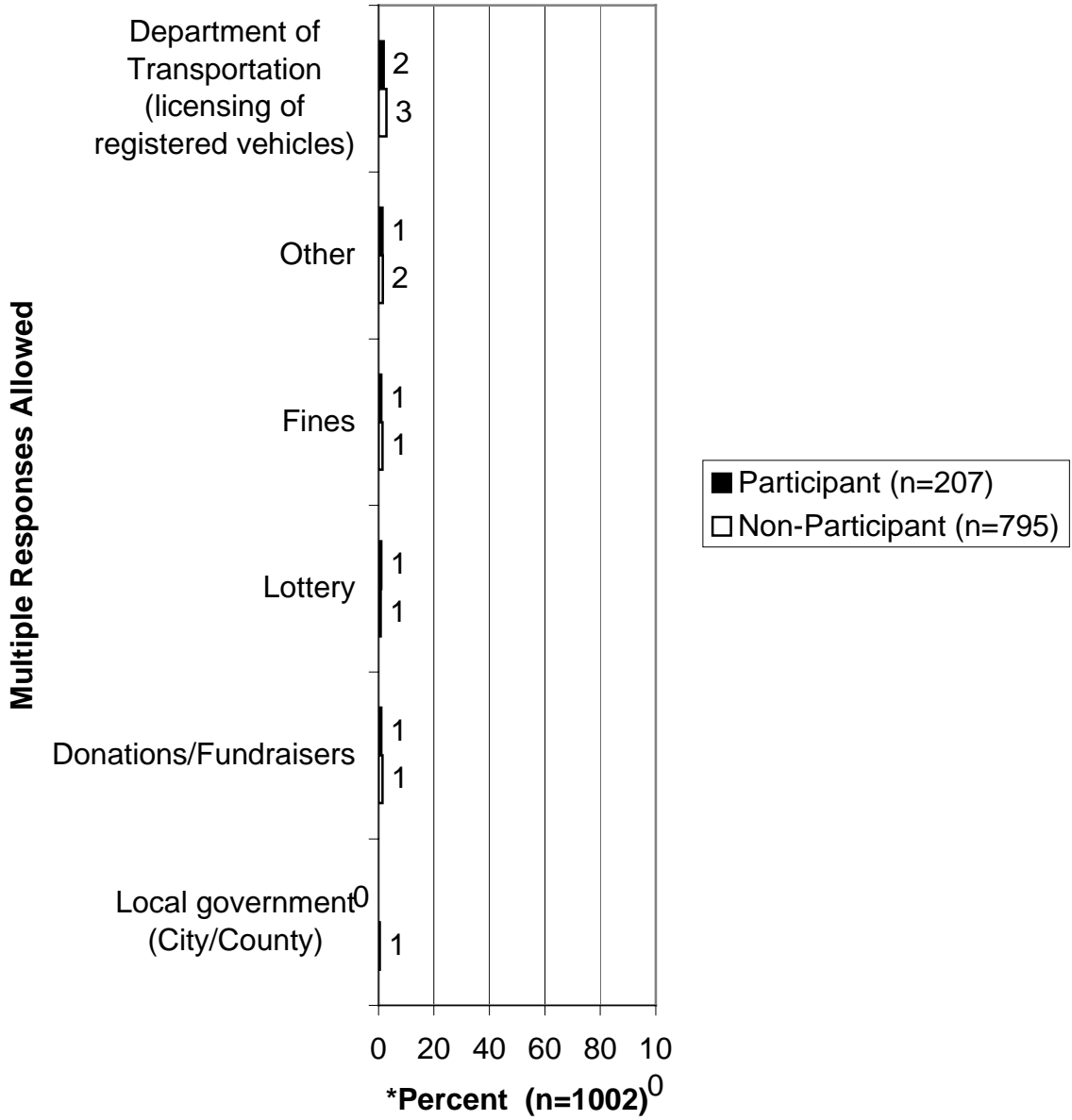
**Q41. Where do you think funds to manage off-highway vehicle use and recreation in Arizona come from? by Q13. Off-highway activity participation.**



**\*Percent (n=1002)**

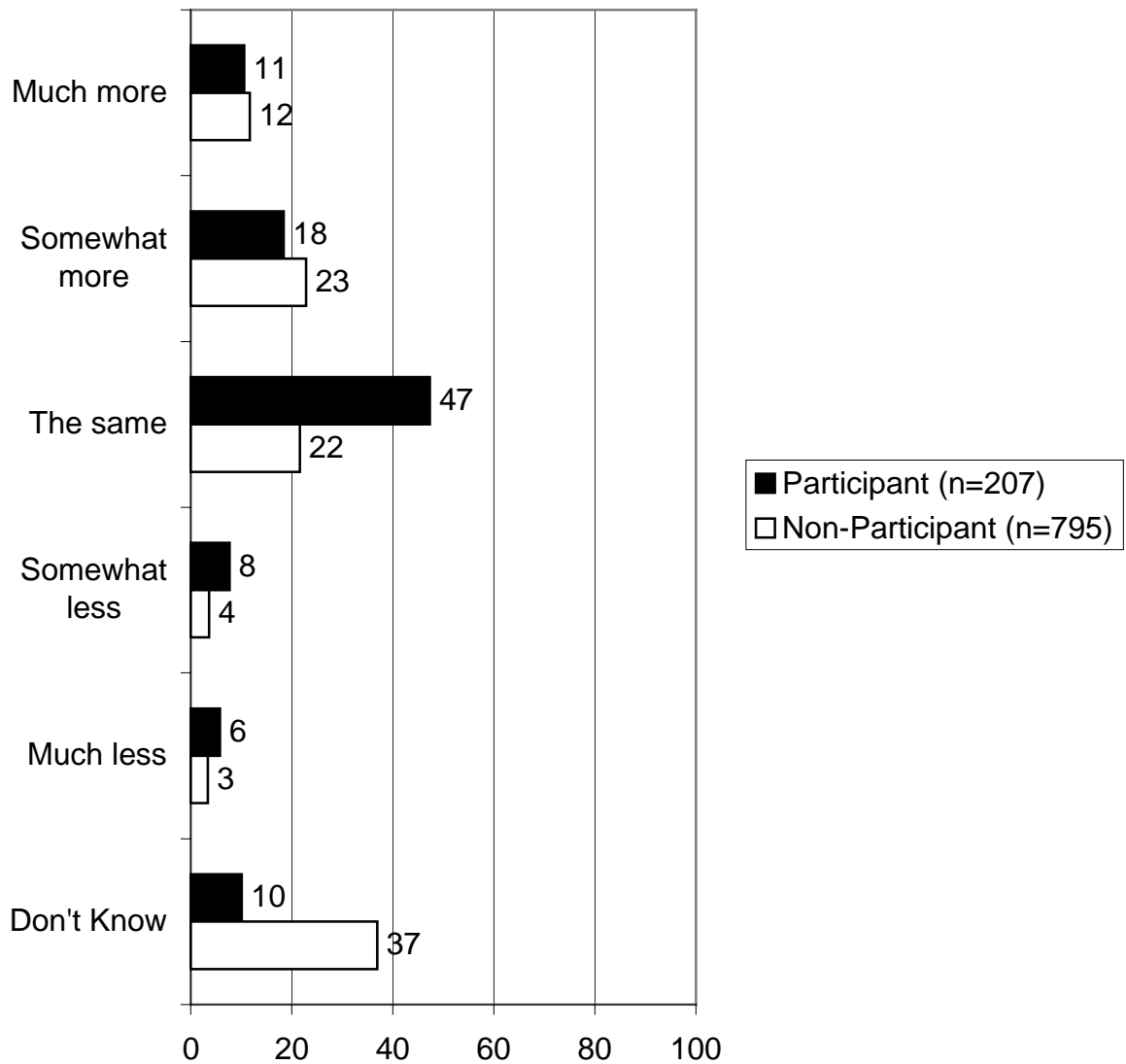
\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

**Q41. Where do you think funds to manage off-highway vehicle use and recreation in Arizona come from? by Q13. Off-highway activity participation.  
(Continued...)**



\*Percent (n=1002)<sup>0</sup>  
 \*(Value without those responding, "Don't Know" (n=6) about OHV participation)

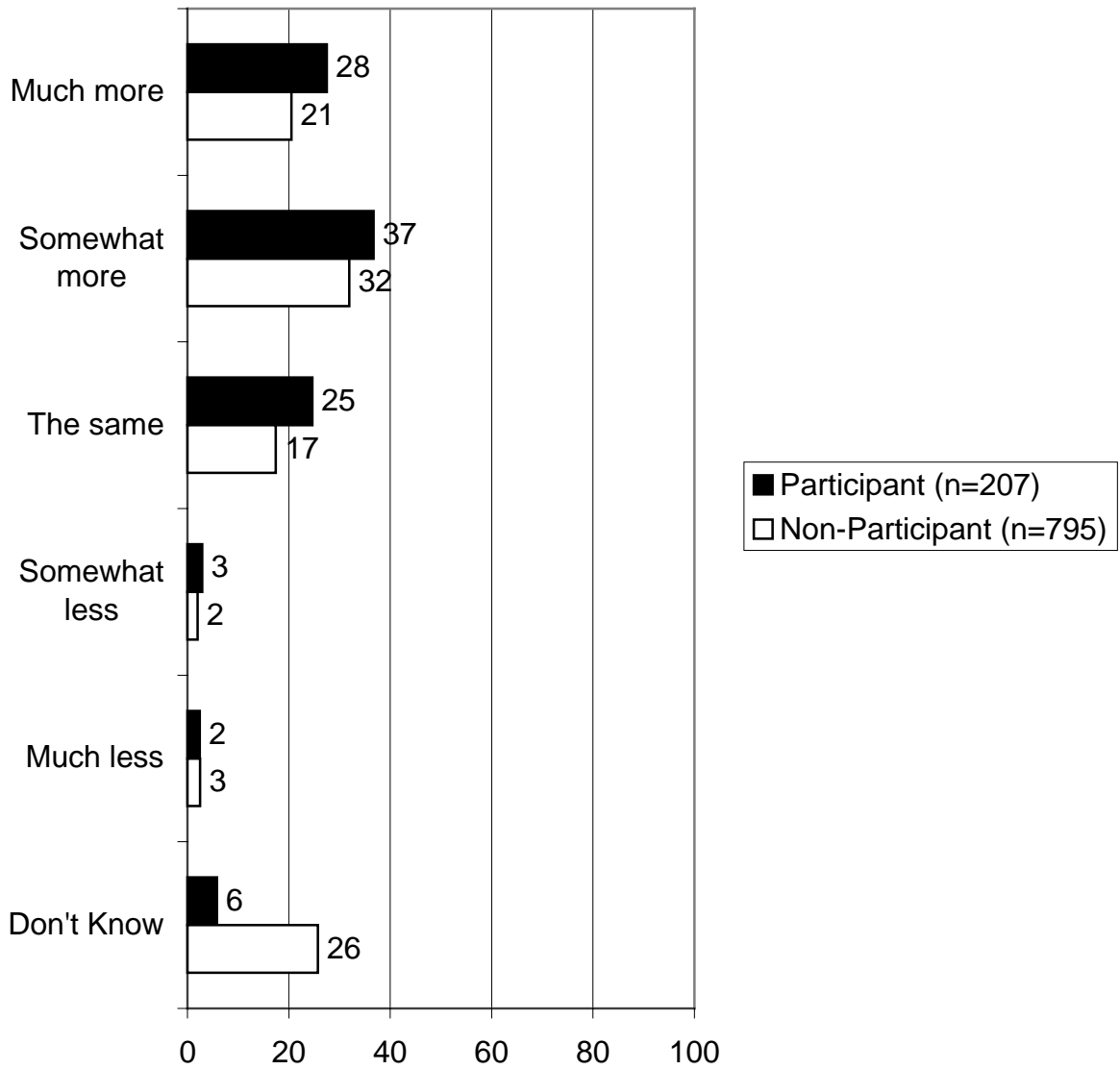
**Q43. Do you feel the Arizona Game and Fish Department should spend more, the same or less time and money ENFORCING OFF-HIGHWAY VEHICLE LAWS? by Q13. Off-highway activity participation.**



**\*Percent (n=1002)**

\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

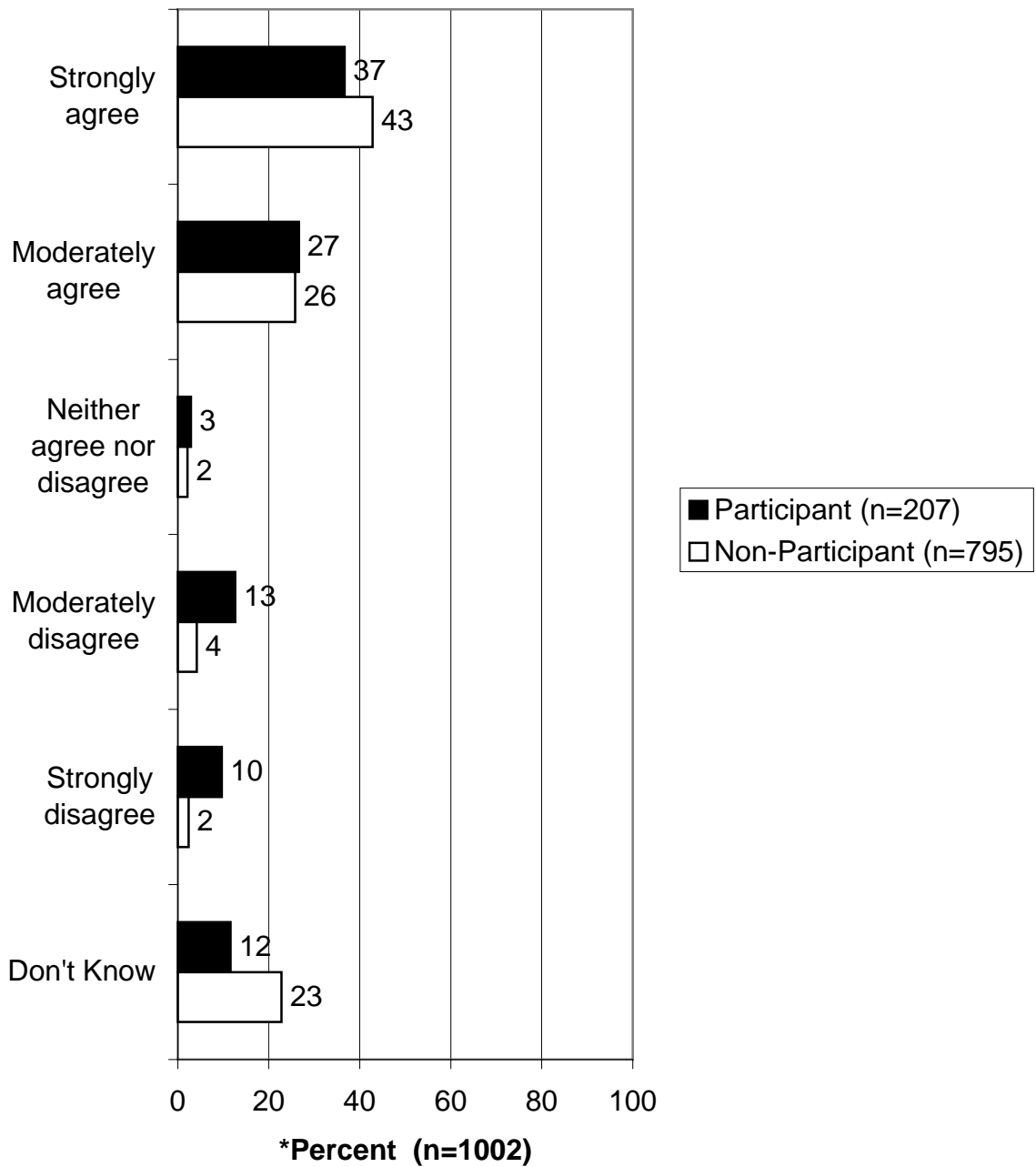
**Q44. Do you feel the Arizona Game and Fish Department should spend more, the same or less time and money INFORMING AND EDUCATING OHV PARTICIPANTS ABOUT OHV RULES AND REGULATIONS? by Q13. Off-highway activity participation.**



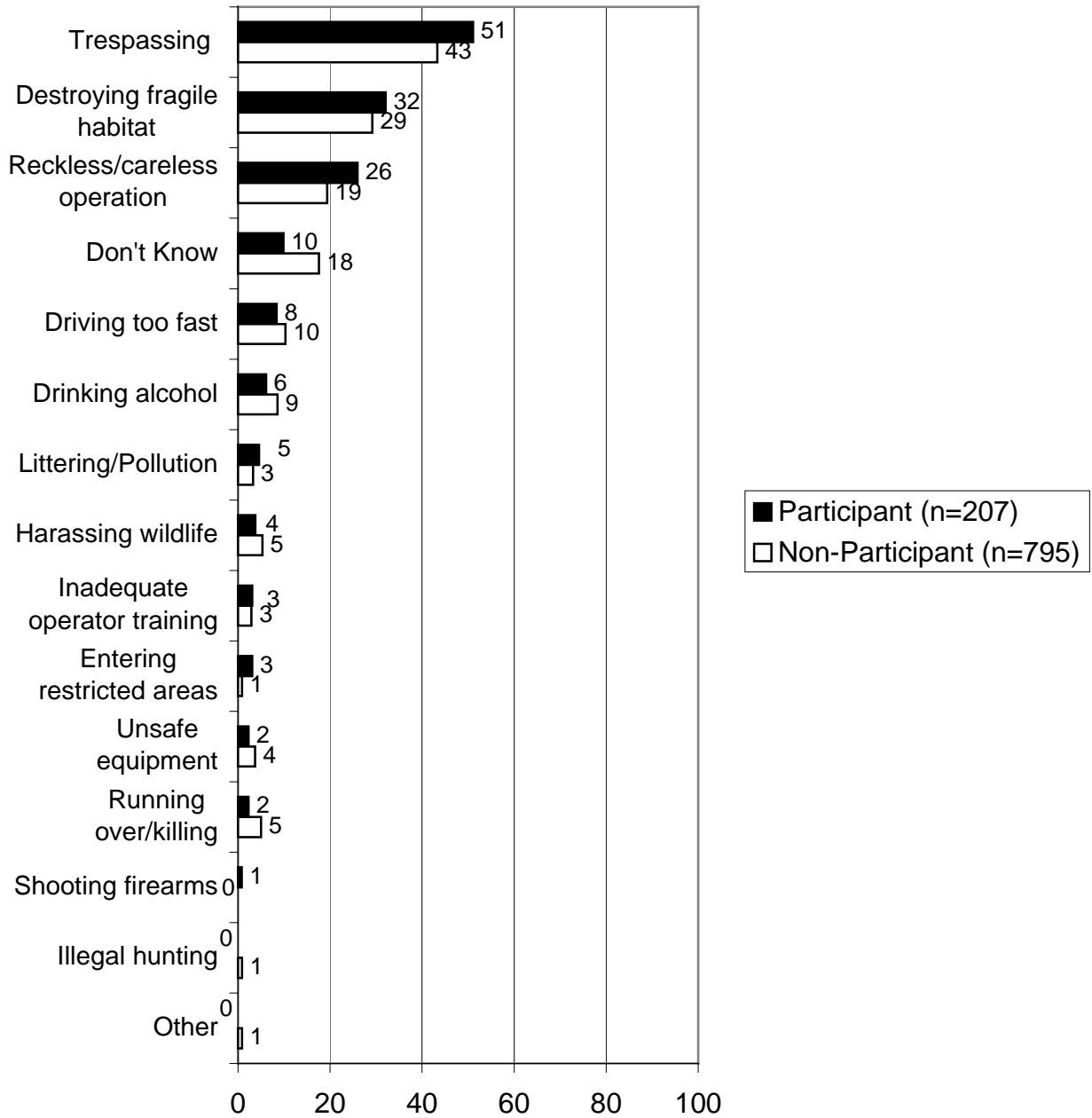
**\*Percent (n=1002)**

\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

**Q45. Do you agree or disagree that a lot of off-highway vehicle participants violate off-highway vehicle laws? by Q13. Off-highway activity participation.**



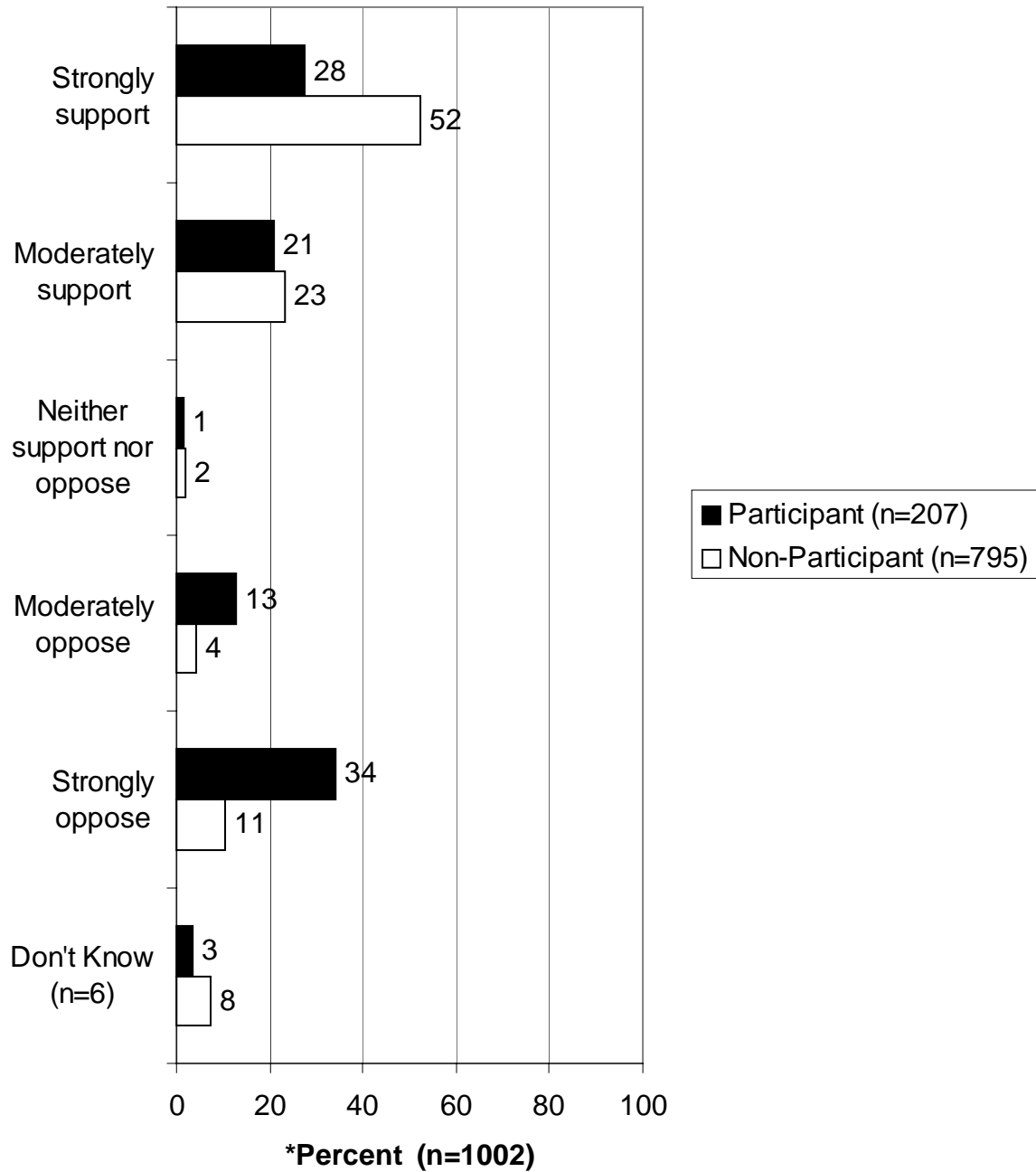
**Q47. Which laws do you think off-highway vehicle participants violate most often? by Q13. Off-highway activity participation.**



**\*Percent (n=1002)**

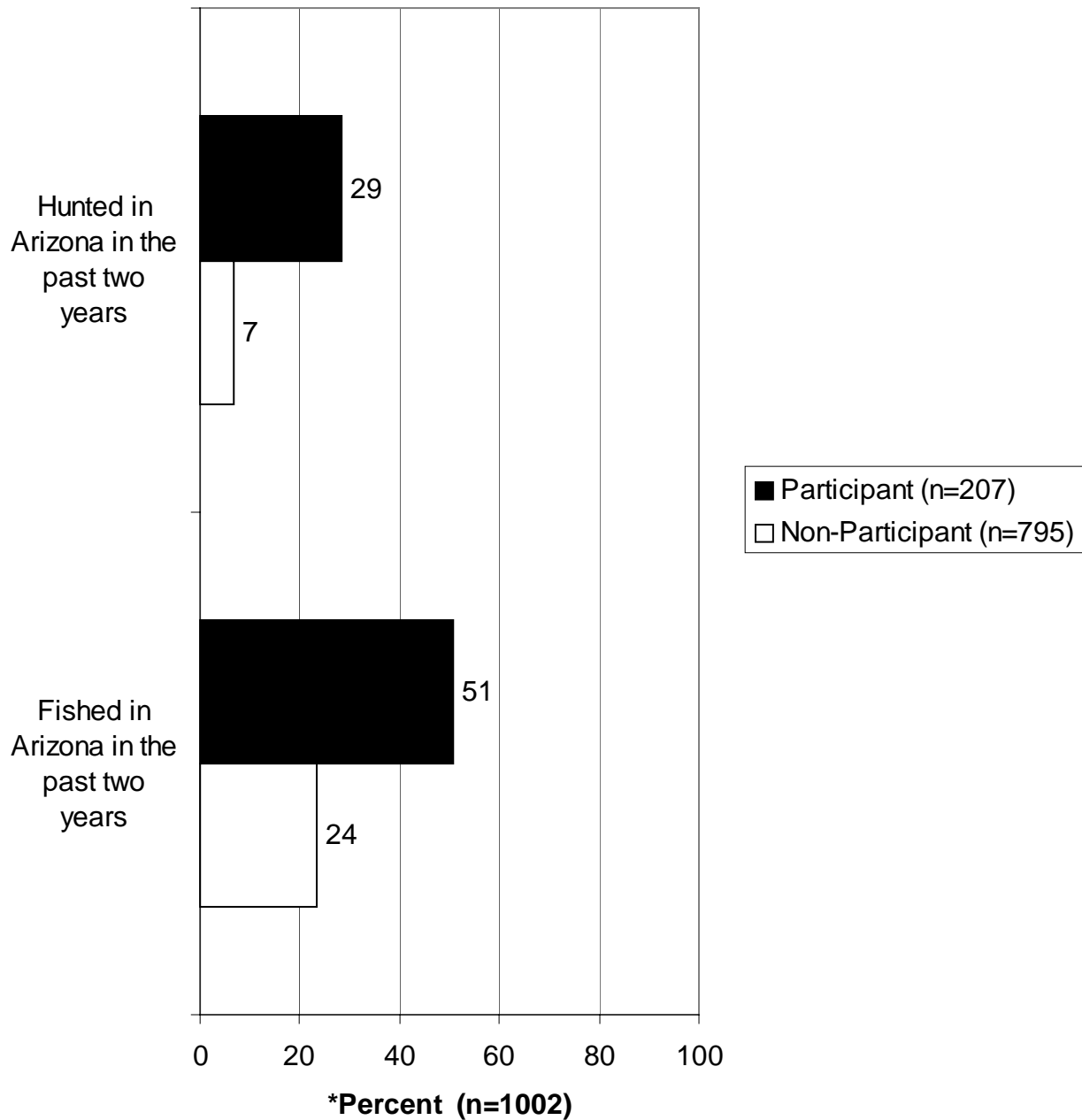
\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

**Q52. Would you support or oppose the idea of a mandatory registration fee...? by Q13. Off-highway activity participation.**

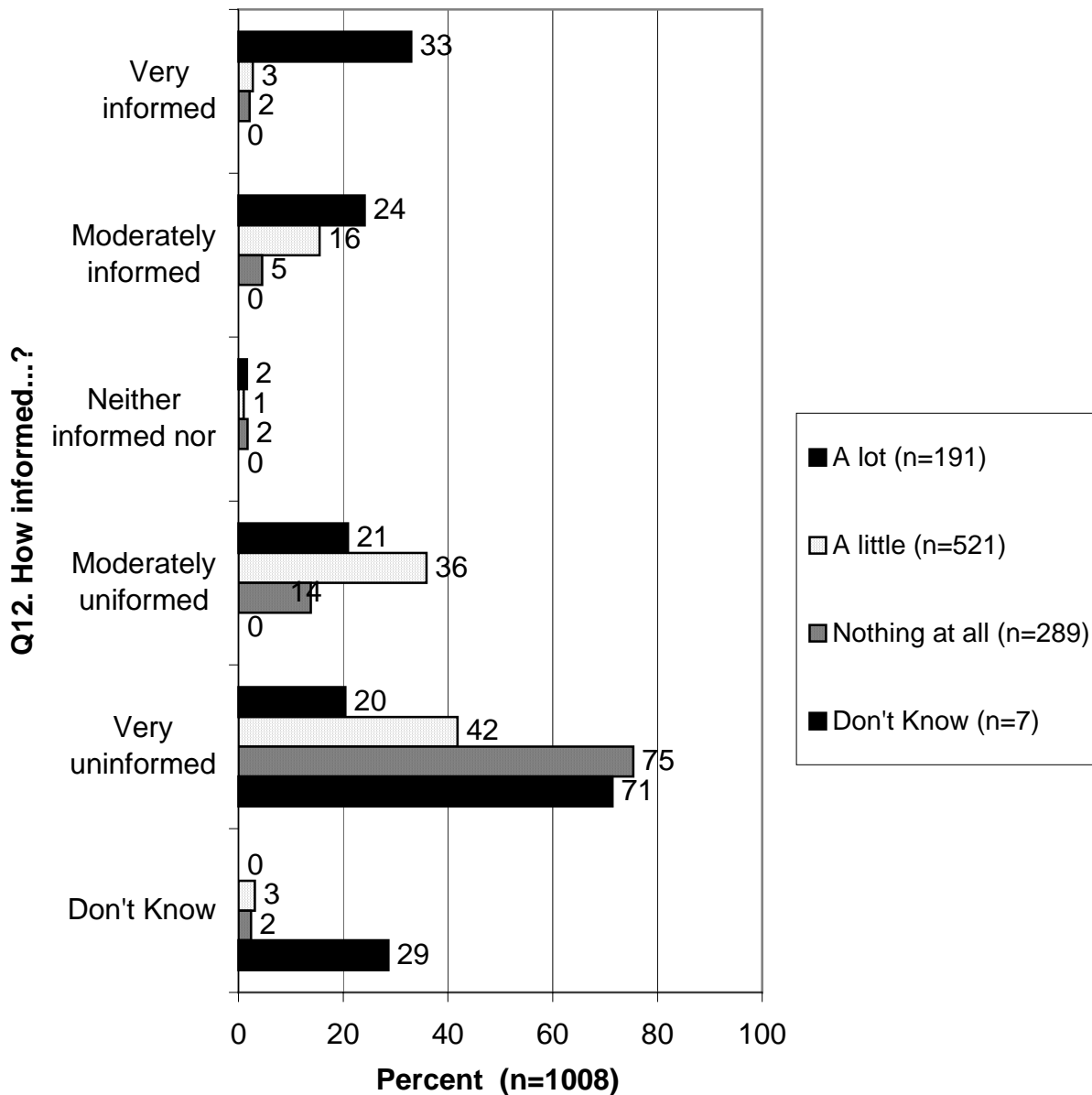


\*(Value without those responding, "Don't Know" (n=6) about OHV participation)

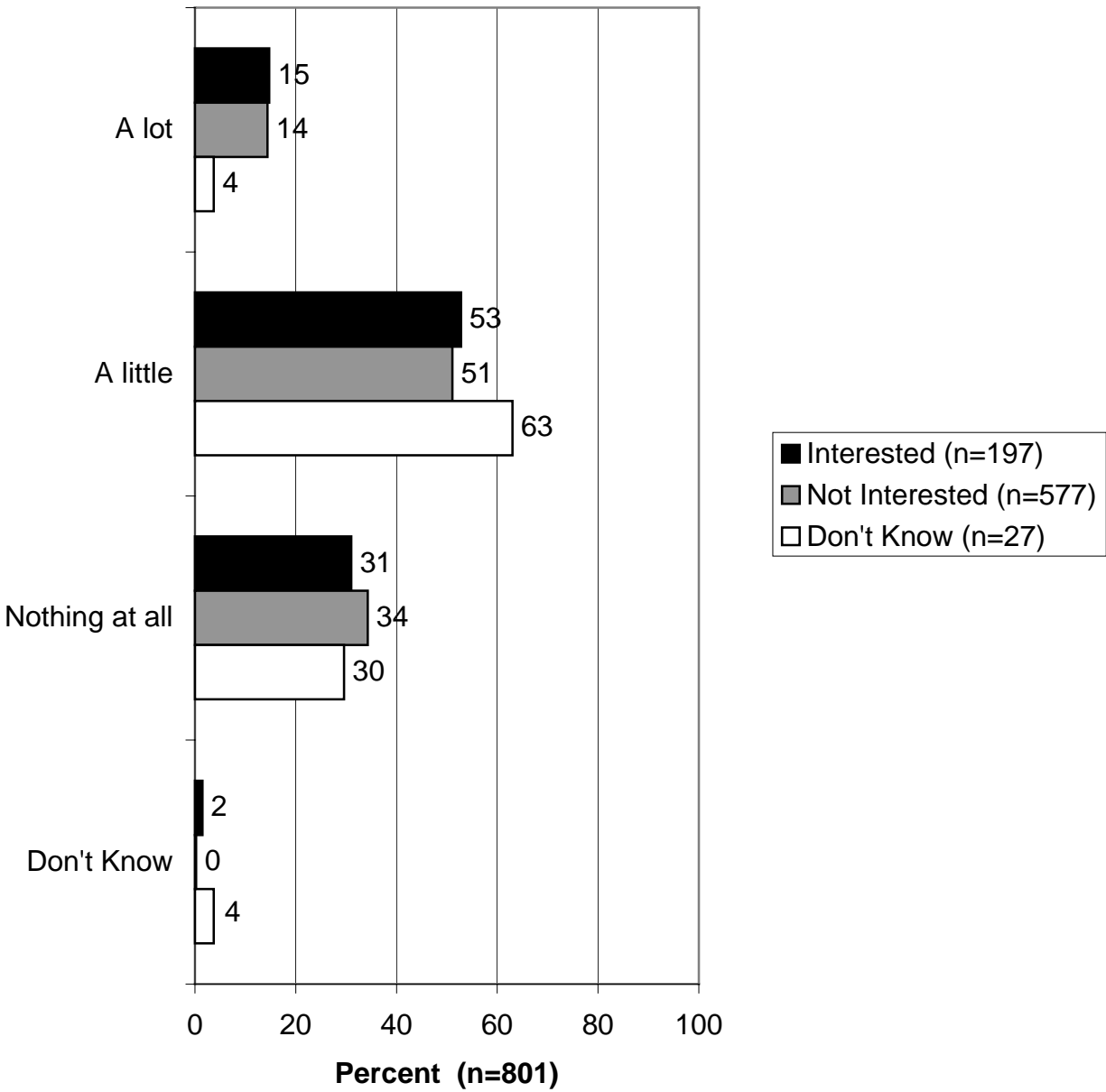
**Q61 and Q62. Have you hunted/fished in Arizona in the past two years? by Q13. Off-highway activity participation.**



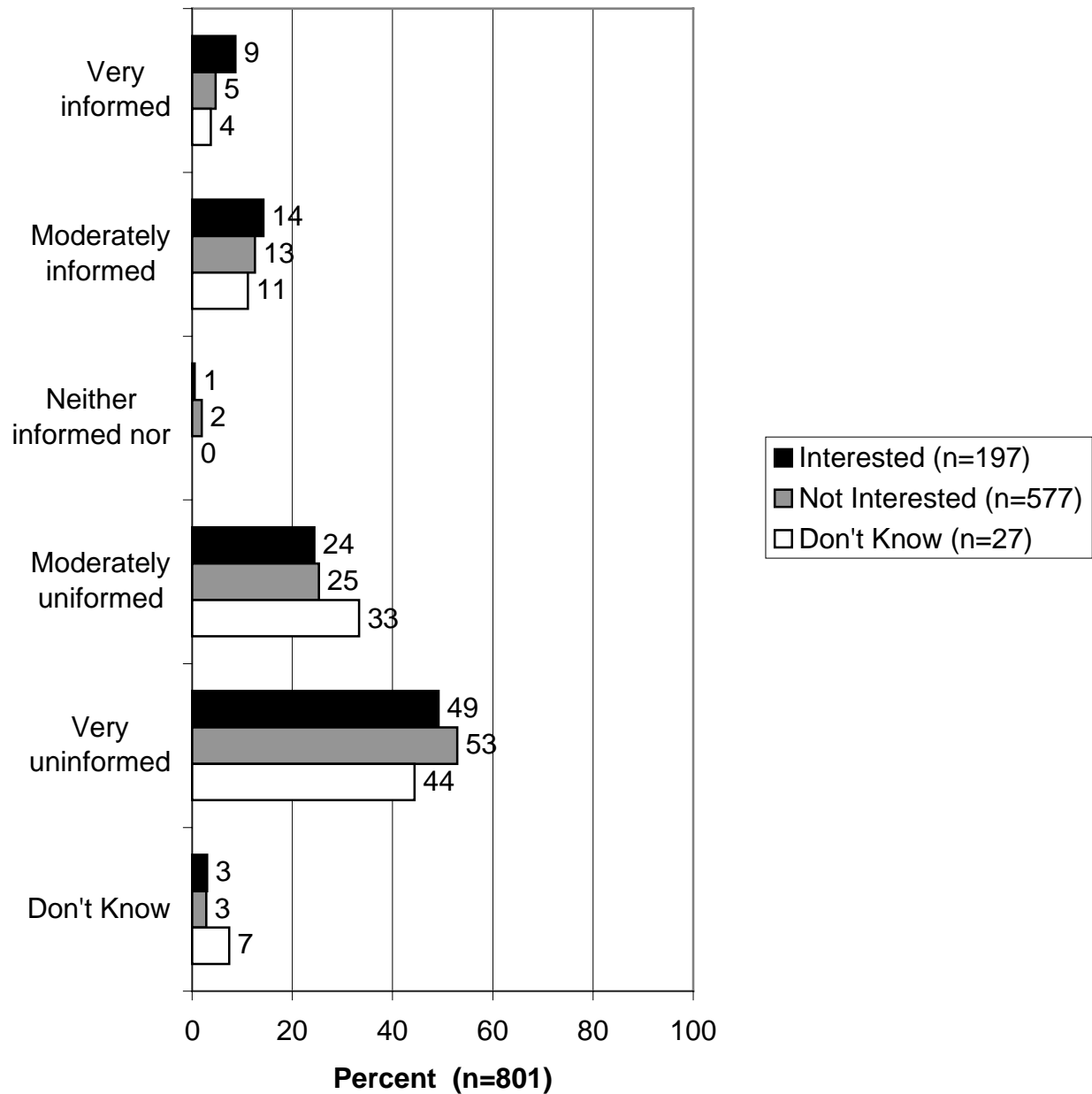
**Q11. How much have you heard about off-highway vehicle activities in Arizona over the past two years By Q12. Would you say you feel informed or uninformed about the laws and regulations concerning off-highway and off-road use in Arizona?**



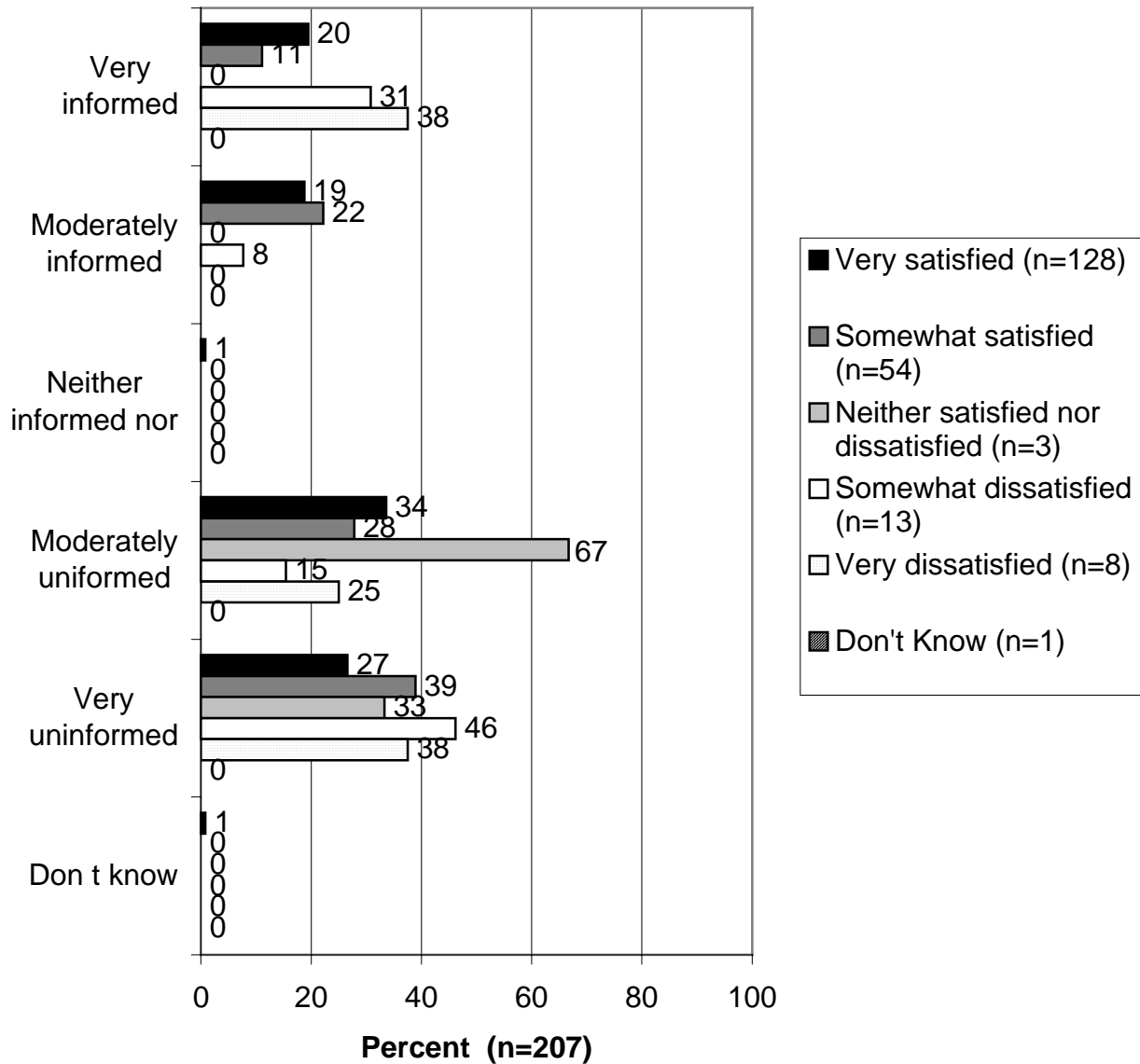
**Q17. Would you be interested in participating in OHV activities...? (asked of respondents with "no" and "don't know" participation responses) by Q11. How much have you heard about off-highway vehicle activities in Arizona over the past two years?**



**Q17. Would you be interested in participating in OHV activities...? (asked of respondents with "no" and "don't know" participation responses) by Q12. Would you say you feel informed or uninformed about the laws...?**



**Q18. In general, are you satisfied or dissatisfied with your OHV experiences...? (asked of OHV participants) by Q12. Would you say you feel informed or uninformed about the laws and regulations concerning off-highway and off-road use in Arizona?**



**Q25. In general, are you satisfied or dissatisfied with the current OHV regulations...? (asked of OHV participants) by Q12. Would you say you feel informed or uninformed about the laws and regulations concerning off-highway and off-road use in Arizona?**

