

Responsive Management™



MARYLAND HUNTING AND FISHING MARKETING INITIATIVE: 2014 SURVEY OF NONRESIDENT HUNTERS AND ANGLERS

2014

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EXECUTIVE SUMMARY

This study was conducted for the Sportsmen’s Marketing Initiative, a private-public partnership between the Maryland Sportsmen’s Foundation and the Maryland Department of Business and Economic Development as part of research on strategies for promoting hunting and fishing opportunities in Maryland. The study entailed a telephone survey of two samples: residents of six nearby states who had purchased a nonresident Maryland hunting or fishing license, and residents of those same states who had hunted or fished but had *not* done so in Maryland.

The sample of residents of six nearby states (Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia) who had purchased a nonresident Maryland hunting or fishing license was obtained the Maryland Department of Natural Resources. This is referred to as the “license sample.”

The sample of residents from those same nearby states who had hunted and/or fished but had *not* done so in Maryland was obtained from Responsive Management’s internal database of various recreational groups in the population (in this case, those who had hunted and/or fished). This is referred to as the “nonlicensed sample.”

The survey was conducted in August and September 2014. Responsive Management obtained a total of 1,050 completed interviews (313 hunters and 315 anglers from the license sample, and 172 hunters and 250 anglers from the nonlicense sample). The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management.

STATES TO TARGET FOR MARKETING EFFORTS

In addition to the survey, an analysis was conducted of the nonresident license database to determine from which states nonresident hunters and anglers come to hunt and fish in Maryland. The state that contributes the greatest numbers of nonresident Maryland hunters is Pennsylvania—by far the top state for nonresident hunting licenses. A second tier consists of Virginia and Delaware (each accounting for more than 2,000 nonresident hunting licenses sold in Maryland). Other states accounting for more than 300 nonresident hunting licenses consist of New Jersey, North Carolina, West Virginia, New York, Florida, and District of Columbia. Note that among that third tier are three states not included in the study area: North Carolina, Florida, and the District of Columbia.

The state that send the most nonresident fishing license holders to Maryland is Pennsylvania—again the top state by far: more than 25,000 nonresident Maryland fishing licenses are sold to Pennsylvania residents. The next tier consists of Virginia and Delaware (each accounting for more than 8,000 licenses sold). Then the third group with relatively substantial sales (at least 800 licenses) consists of the District of Columbia, West Virginia, New Jersey, New York, Ohio, Florida, and North Carolina. Among that third tier not among the study states are the District of Columbia, Ohio, Florida, and North Carolina. It may be worth targeting, to some degree these other states that were not included in the study region.

TARGET MARKETS

A primary target market is made up simply of those who have already hunted and fished in Maryland. Both ratings of interest in hunting/fishing in Maryland and likelihood of hunting/fishing in Maryland are greater among those who had already participated in Maryland. While it is important to draw new customers, it is also important to know that the people most receptive to marketing efforts will be those who have already done their activity in Maryland. In other words, before spending inordinate amounts of resources targeting new hunters and anglers, solid efforts should be made to first attract those who have already hunted and fished in Maryland.

It is worth mentioning the idea of “churn” in hunting and fishing. Churn refers to hunters’ and anglers’ tendency to sometimes take a year off from their hunting and fishing. In other words, while most hunters and anglers go hunting and fishing every year, there are, nonetheless, sizeable portions of these groups who go only 2 out of every 3 years. By focusing some amount of effort on outreach to established hunters and anglers, it may be that this churn rate can be reduced—in other words, it may be that Maryland can raise the rate of hunters and anglers who go every year.

The data suggest that the typical hunter or angler coming to Maryland is *not* a trophy seeker. Instead, the data suggest that they are better characterized as seeking commonly hunted and fished species such as white-tailed deer, waterfowl, black bass, and white bass.

Other information on target markets can be gleaned from the demographic data. The data show exactly the characteristics of those who come to Maryland to hunt and fish. For instance, they are composed overwhelmingly of males (98% of hunters, 91% of anglers), are mostly middle aged (both have a peak in the 45 to 54 years old range), are composed mostly of whites, are without children in the household (76% of hunters and 67% of anglers have no children in their home), and have small households (a majority of both hunters and anglers have a 2-person or 1-person household). They are, in general, coming to the state expressly to hunt and fish (rather than coming to Maryland for other things and getting some hunting and fishing in on the side; this is particularly true of hunters). Furthermore, they generally are not bringing non-hunters and non-anglers with them.

Waterfowl hunters are a very important target market. While white-tailed deer is the most hunted species in Maryland and all of the six states of the study, the evidence suggested that interest in waterfowl hunting plays an important role among nonresident hunters visiting Maryland.

Also regarding species, bass fishing is more important than trout fishing in Maryland, particularly for those coming to Maryland to fish. The survey showed that more nonresident Maryland anglers fish for bass than for trout.

CONNECTING WITH THE MOTIVATIONS FOR HUNTING AND FISHING

For hunting outreach, making a connection to family and friends will resonate among potential hunters—those hunters from the six study states who hunted in Maryland were more likely to say that being with family and friends is a primary motivation than were those who had not hunted in Maryland. In fact, hunting with friends and family is the top motivation for hunting either in Maryland or in another state. Note, however, that hunters are not bringing family with them who do *not* hunt. The majority of hunters (and anglers, as well) are not bringing non-hunters and non-anglers with them.

For fishing outreach, the connection to make is with fishing as a sport/recreation (the motivation of being with family and friends does not have that strong connection as it does for hunters). Anglers who fished in Maryland were more motivated by the sport or recreation than were those anglers who did not fish in Maryland. Also, for the sport or recreation is the top motivation among anglers for fishing, among those who fished in Maryland.

The question about why hunters and anglers started hunting and fishing in a state outside of their home state found that only a small percentage did so because of dissatisfaction with hunting or fishing in their home state. It would appear that hunters and anglers are not so much driven to hunt and fish outside of their home state because of bad conditions but rather because of opportunities in those other states or because they want to. In other words, they are attracted by the other state rather than being repelled by their home state.

Also of interest in outreach is whether emphasizing hunting and fishing opportunities as providing variety would be effective. However, the question about why people hunt and fish in Maryland found that a very low percentage indicated doing so because they could hunt or fish different species than they have in their home state. To summarize this point, Maryland should be advertised as a destination in addition to their home state rather than as an alternative to their home state. (It is worth mentioning that about three quarters of Maryland nonresident hunters/anglers went hunting/fishing in their home state as well.)

THINGS THAT WOULD ENCOURAGE HUNTING AND FISHING PARTICIPATION IN MARYLAND

The survey results suggest that linking hunting and fishing opportunities to vacations (particularly regarding fishing) might be worthwhile. One of the important reasons that anglers gave for starting to fish in a state other than their home state is that they were on vacation. While most anglers are not currently fishing on the spur of the moment while on vacation, they might be persuaded to fish on vacation if fishing is a *planned* activity during their vacation.

License discounts would also appear, based on the survey results, to help with nonresident license sales, as a discount on a license was the top-ranked item that would make people more interested in hunting and fishing in Maryland. Putting this together with other findings suggest that making a discount that includes family and friends as well would be effective for hunting outreach (because being with family and friends is a top motivation for hunting), and linking the discount to vacation packages would be effective for fishing outreach.

Finally, access was an important issue for potential hunters and anglers in the survey. Access includes the opportunities to safely and cost-effectively use private and public lands. This is particularly important among non-waterfowl hunters who do not enjoy the large open public waters provided by the Chesapeake Bay and its many tributaries. In a broad sense, access also includes the provision of opportunities for hunting and fishing, with increasing “access” being afforded by longer or additional seasons. The results of several questions suggested that there is a greater interest in visiting Maryland for hunting if hunters were afforded longer or different seasons, including the opportunity to hunt on Sunday or hunt more Sundays than are currently offered in many counties in Maryland.

CROSSOVER PARTICIPATION

In this regard, “crossover” participation means hunters going fishing or anglers going hunting. As is well known, many hunters fish and many anglers hunt. The survey helped to quantify this, finding that hunters are much more likely to go fishing than anglers are to go hunting: 70% of the hunters also went fishing, while 39% of anglers went hunting. Therefore, it would appear that getting hunters to fish is an easier sell than getting anglers to hunt. Nonetheless, with substantial dual participation, both hunters and anglers are ripe markets for outreach in fishing and hunting.

An important aspect of crossover participation is the creation of a unique target market: those who do both hunting and fishing in their home state but do only one or the other in Maryland. In looking at those who had come to Maryland to hunt or fish, a large portion had done both activities in their home state. But most of those people who do both activities in their home state do only one of the two activities in Maryland (71% of hunters who participated in both hunting and fishing in their home state and who traveled to Maryland to hunt did *not* fish in Maryland; 92% of anglers who participated in both hunting *and* fishing in their home state and who traveled to Maryland to fish did *not* hunt in Maryland). It may be worthwhile to target fishing outreach to those hunters and do the same regarding hunting outreach to those anglers. (Note that the first—marketing fishing to hunters—will likely be a little more successful than the second. There is simply a larger proportion of hunters who fish than anglers who hunt.)

FRESHWATER VERSUS SALTWATER FISHING AND USE OF BOATS

The report notes that slightly more interest was expressed among the angler sample for saltwater fishing in Maryland than for freshwater fishing: 47% expressed the most interest in saltwater, while 36% expressed the most interest in freshwater. Therefore, while both are important, it may be that saltwater fishing will attract more nonresident anglers than will freshwater fishing.

It is also noteworthy that most of the saltwater anglers in Maryland are also saltwater fishing in their home states. Therefore, not only is there a market for saltwater fishing among those who do not have access to it in their home states, there is a market among those who also go saltwater fishing in their home state.

Fishing from a boat, as opposed to doing so from the bank/shore or from a pier, was the top choice of anglers in the survey. These results, coupled with the results elsewhere in the survey,

suggest two important groups: saltwater anglers fishing on the Chesapeake Bay or in other tidal waters via boat, and bass anglers in the larger rivers (like the Potomac) fishing for bass. Linking boating and fishing would appear to be effective in outreach.

PRIVATE LAND AND PUBLIC LAND

Most hunters in the survey, regardless of whether they participated in Maryland or not, indicated that they hunted mostly on private land. For this reason, private land programs will be integral to encouraging people to hunt in Maryland.

SOURCES OF INFORMATION

The Internet is the top source that hunters and anglers named when they were asked about what they use when looking for information about hunting and fishing. Nonetheless, almost 1 in 5 of these sportspersons use printed travel books and guidebooks, and about the same amount use television. Furthermore, piquing interest is different than providing information, so a reliance solely on the Internet would not be wise, but good, easy-to-use websites are important. Note that Facebook is an important form of social media for information, as well.

INTRODUCTION AND METHODOLOGY

This study was conducted for the Sportsmen's Marketing Initiative, a private-public partnership between the Maryland Sportsmen's Foundation and the Maryland Department of Business and Economic Development as part of research on strategies for promoting hunting and fishing opportunities in Maryland. The study entailed a telephone survey of two samples: residents of six nearby states who had purchased a nonresident Maryland hunting or fishing license, and residents of those same states who had hunted or fished but had *not* done so in Maryland. 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 the target samples (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.

SURVEY SAMPLES

The sample of residents of six nearby states (Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia) who had purchased a nonresident Maryland hunting or fishing license was obtained from the Maryland Department of Natural Resources. This is referred to as the "license sample."

The sample of residents from those same nearby states who had hunted and/or fished but had *not* done so in Maryland was obtained from Responsive Management's internal database of various recreational groups in the population (in this case, those who had hunted and/or fished). This is referred to as the "nonlicensed sample."



The intent in selecting a sample of those who did not have nonresident licenses but who had hunted or fished somewhere within the past 3 years was that they would *not* have hunted or

fished in Maryland, as the study was interested in their opinions. However, a few people in the nonlicense sample had hunted or fished in Maryland. Within the survey, there was logic to put these respondents into the proper group for questions—in other words, these respondents would have gotten questions for the “hunted/fished in Maryland” path. Therefore, in some places, the survey report will speak of and analyze questions based on those who had hunted/fished in Maryland (which includes respondents from both the license and nonlicense samples) and those who had *not* hunted or fished in Maryland (which is a portion of the nonlicense sample).

QUESTIONNAIRE DESIGN

The telephone survey questionnaire was developed cooperatively by Responsive Management and the Sportsmen’s Marketing Initiative Committee, based on the research team’s familiarity with hunting, fishing, and natural resources. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey for both groups who were being interviewed.

The questionnaire had two distinct paths: 1) a hunter path and 2) an angler path. Everybody in both the license sample and the nonlicense sample were put into one or the other of the paths at the outset of the survey, based on whether they had a hunting license or a fishing license (for the license sample) or based on whether they were in the nonlicense sample as a likely hunter or as a likely angler. References to the “primary” activity refers to this determination at the outset.

The questionnaire asked people about a primary activity: either hunting or fishing, identified on the callsheet prior to the survey. A requirement of being surveyed in the hunter group was that the respondent had to have hunted in the past 3 years; an analogous requirement was made of anglers.

Some questions were asked only of those who had hunted and/or fished *in Maryland*, while other questions were asked only of those who had *not* done so. The survey itself controlled these branches based on each respondent’s previous answers to survey questions.

The tabulations below and on the following page summarize the groups that were examined in the survey, based on both the sampling frame and the questionnaire paths.

Respondent Category Based on:	Group 1	Group 2
License database (this did not change during the survey: respondents were either in the license sample or the nonlicense sample)	License sample: Maryland nonresident hunters and anglers who had purchased a license in the past 3 years (a screener question ensured that only those who had actually hunted or fished somewhere in the past 3 years were included in the survey)	Nonlicense sample: respondents who had <i>not</i> purchased a nonresident Maryland license in the past 3 years (the intent was that these people would not have hunted or fished in Maryland, but some had done so; even if they had, they are still part of the nonlicense sample)

Respondent Category Based on:	Group 1	Group 2
Hunter/Angler (this did not change in the survey: respondents were put into one or the other path at the outset of the survey and were kept in that path)	Hunter sample: those in the license sample who had a hunting license; those in the nonlicense sample who had been identified prior to the survey as a likely hunter; for these respondents, hunting is referred to as their “primary” activity, and they went through the hunter path of the survey	Angler sample: those in the license sample who had a fishing license; those in the nonlicense sample who had been identified prior to the survey as a likely angler; for these respondents, fishing is referred to as their “primary” activity, and they went through the fishing path of the survey

Respondent Category Based on:	Group 1	Group 2
Did the primary activity in Maryland or not (this categorization was determined during the survey based on responses to questions)	Did the primary activity in Maryland (this includes all the license sample; additionally, it includes a small portion of the nonlicense sample)	Did not do the primary activity in Maryland (this is made up of the majority of the nonlicense sample)

TELEPHONE INTERVIEWING FACILITIES

A central polling location in Harrisonburg, Virginia, 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 August and September 2014.

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 1,050 completed interviews (313 hunters and 315 anglers from the license sample, and 172 hunters and 250 anglers from the nonlicense sample).

DATA ANALYSIS

The analysis of data was performed using Statistical Package for the Social Sciences as well as proprietary software developed by Responsive Management.

On questions that asked respondents to provide a number (e.g., dollars spent), the graphs may show ranges of numbers rather than the precise numbers. Nonetheless, in the survey each respondent provided a precise number, and the dataset includes this precise number, even if the graph shows only ranges of numbers. Note that the calculation of means and medians used the precise numbers that the respondents provided.

SAMPLING ERRORS

The sampling error for Maryland licensed nonresident hunters is 5.50 percentage points, based on a sample size of 313 and a population size of 20,828 licensed nonresident hunters. The sampling error for Maryland licensed nonresident anglers is 5.51 percentage points, based on a sample size of 315 and a population size of 60,354 Maryland licensed nonresident anglers. The sampling errors were calculated using the formula described on the following page. Note that no sampling errors could be calculated for the nonlicensed hunters and anglers, as the total populations of these groups are unknown.

Sampling Error Equation

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

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).

ADDITIONAL INFORMATION ABOUT THE PRESENTATION OF RESULTS IN THE REPORT

In examining the results, it is important to be aware that the questionnaire included several types of questions:

- Open-ended questions are those in which no answer set is read to the respondents; rather, they can respond with anything that comes to mind from the question.
- Closed-ended questions have an answer set from which to choose.
- Single or multiple response questions: Some questions allow only a single response, while other questions allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."
- Scaled questions: Many closed-ended questions (but not all) are in a scale, such as excellent-good-fair-poor.
- Series questions: Many questions are part of a series, and the results are primarily intended to be examined relative to the other questions in that series (although results of the questions individually can also be valuable). Typically, results of all questions in a series are shown together.

Some graphs show an average, either the mean or median (or both). The mean is simply the sum of all numbers divided by the number of respondents. Because outliers (extremely high or low numbers relative to most of the other responses) may skew the mean, the median may be shown. The median is the number at which half the sample is above and the other half is below. In other words, a median of 15 days means that half the sample gave an answer of more than 15 days and the other half gave an answer of less than 15 days.

Most graphs show results rounded to the nearest integer; however, all data are stored in decimal format, and all calculations are performed on unrounded numbers. For this reason, some results may not sum to exactly 100% because of this rounding on the graphs. Additionally, rounding may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when "very satisfied" and "somewhat satisfied" are summed to determine the total percentage who are satisfied).

IMPLICATIONS OF SURVEY RESULTS

Perhaps the most important point is that the report and its data should be consulted in any outreach strategy. While some recommendations are being made in the rest of this section, only those people closest to the efforts—those who have a nuanced view of hunting and fishing outreach in Maryland—can fully see the implications of the results. Therefore, the survey results in the body of this report may allow stakeholders to see strategy implications that are not covered below.

A second important point is simply to state that outreach efforts are necessary. When asked for their main reason for *not* hunting or fishing in Maryland among those hunters and anglers who did not do so, lack of interest in Maryland and an unfamiliarity with Maryland were both top reasons. Clearly, there is need to pique the interest of hunters and anglers, as well as make them aware of opportunities of which they can take advantage. Additionally, the ratings of the quality of Maryland's hunting and fishing is higher among those who have been to Maryland than those who have not. In fact, among those who have been to Maryland to hunt and fish, Maryland receives the highest mean rating of all the seven states asked about. It would appear that simply informing people of the high quality hunting and fishing available in Maryland would increase their perception of Maryland and possibly encourage them to try hunting and fishing in the state.

STATES TO TARGET FOR MARKETING EFFORTS

In addition to the survey, an analysis was conducted of the nonresident license database to determine from which states nonresident hunters and anglers come to hunt and fish in Maryland. The state that contributes the greatest numbers of nonresident Maryland hunters is Pennsylvania—by far the top state for nonresident hunting licenses. A second tier consists of Virginia and Delaware (each accounting for more than 2,000 nonresident hunting licenses). Other states accounting for more than 300 nonresident hunting licenses consist of New Jersey, North Carolina, West Virginia, New York, Florida, and District of Columbia. Note that among that third tier are three states not included in the study area: North Carolina, Florida, and the District of Columbia.

The state that send the most nonresident fishing license holders to Maryland is Pennsylvania—again the top state by far: more than 25,000 nonresident Maryland fishing licenses are sold to Pennsylvania residents. The next tier consists of Virginia and Delaware (each accounting for more than 8,000 licenses sold). Then the third group with relatively substantial sales (at least 800 licenses) consists of the District of Columbia, West Virginia, New Jersey, New York, Ohio, Florida, and North Carolina. Among that third tier not among the study states are the District of Columbia, Ohio, Florida, and North Carolina. It may be worth targeting, to some degree these other states that were not included in the study region.

Regarding travel distances, the results suggest that anglers are willing to travel slightly farther than are hunters.

TARGET MARKETS

A primary target market is made up simply of those who have already hunted and fished in Maryland. Both ratings of interest in hunting/fishing in Maryland and likelihood of fishing/hunting in Maryland are greater among those who had already participated in Maryland. While it is important to draw new customers, it is also important to know that the people most receptive to marketing efforts will be those who have already done their activity in Maryland. In other words, before spending inordinate amounts of resources targeting new hunters and anglers, solid efforts should be made to first attract those who have already hunted and fished in Maryland.

It is worth mentioning the idea of “churn” in hunting and fishing. Churn refers to hunters’ and anglers’ tendency to sometimes take a year off from their hunting and fishing. In other words, while most hunters and anglers go hunting and fishing every year, there are, nonetheless, sizeable portions of these groups who go only 2 out of every 3 years. By focusing some amount of effort on outreach to established hunters and anglers, it may be that this churn rate can be reduced—in other words, it may be that Maryland can raise the rate of hunters and anglers who go every year.

One of the research questions to be answered by the survey was what type of person was likely to come to Maryland to hunt and fish. In other words, was it a high-end hunter or angler seeking trophies or seeking to hunt species that are unavailable in their home state? The data suggest that the typical hunter or angler coming to Maryland is *not* that high-end trophy seeker. Instead, the data suggest that they are better characterized as the common man (and it is mostly men), coming for simple hunting and fishing excursions. The focus in outreach, then, should not be high-end experiences like marlin fishing off the coast. Rather, the common hunter and anglers are seeking white-tailed deer, waterfowl, black bass, or white bass.

Other information on target markets can be gleaned from the demographic data. The data show exactly the characteristics of those who come to Maryland to hunt and fish. For instance, they are composed overwhelmingly of males (98% of hunters, 91% of anglers), are mostly middle aged (both have a peak in the 45 to 54 years old range), are composed mostly of whites, are without youth in the household (76% of hunters and 67% of anglers have no youth in their home), and have small households (a majority of both hunters and anglers have a 2-person or 1-person household). As alluded to before, they are coming to the state expressly to hunt and fish (rather than coming to Maryland for other things and getting some hunting and fishing in on the side; this is particularly true of hunters). Furthermore, they generally are not bringing non-hunters and non-anglers with them.

Waterfowl hunters are a very important target market. While white-tailed deer is the most hunted species in Maryland and all of the six states of the study, the evidence suggested that interest in waterfowl hunting plays an important role among nonresident hunters visiting Maryland.

Also regarding species, bass fishing is more important than trout fishing in Maryland, particularly for those coming to Maryland to fish. The survey showed that more nonresident Maryland anglers fish for bass than for trout.

CONNECTING WITH THE MOTIVATIONS FOR HUNTING AND FISHING

For hunting outreach, making a connection to family and friends will resonate among potential hunters—those hunters from the six study states who hunted in Maryland were more likely to say that being with family and friends is a primary motivation than were those who had not hunted in Maryland. In fact, hunting with friends and family is the top motivation for hunting either in Maryland or in another state. Note, however, that hunters are not bringing family with them who do *not* hunt. The majority of hunters (and anglers, as well) are not bringing non-hunters and non-anglers with them.

For fishing outreach, the connection to make is with fishing as a sport/recreation (the motivation of being with family and friends does not have that strong connection as it does for hunters). Anglers who fished in Maryland were more motivated by the sport or recreation than were those anglers who did not fish in Maryland. Also, for the sport or recreation is the top motivation among anglers for fishing, among those who fished in Maryland.

The question about why hunters and anglers started hunting and fishing in a state outside of their home state found that only a small percentage did so because of dissatisfaction with hunting or fishing in their home state. It would appear that hunters and anglers are not so much driven to hunt and fish outside of their home state because of bad conditions but rather because of opportunities in those other states or because they want to. In other words, they are attracted by the other state rather than being repelled by their home state.

Also of interest in outreach is whether emphasizing hunting and fishing opportunities as providing variety would be effective. However, the question about why people hunt and fish in Maryland found that a very low percentage indicated doing so because they could hunt or fish different species than they have in their home state. To summarize this point, Maryland should be advertised as a destination in addition to their home state rather than as an alternative to their home state. (It is worth mentioning that about three quarters of Maryland nonresident hunters and anglers went hunting and fishing in their home state as well.)

THINGS THAT WOULD ENCOURAGE HUNTING AND FISHING PARTICIPATION IN MARYLAND

The survey results suggest that linking hunting and fishing opportunities to vacations (particularly regarding fishing) might be worthwhile. One of the important reasons that anglers gave for starting to fish in a state other than their home state is that they were on vacation. While most anglers are not currently fishing on the spur of the moment while on vacation (as discussed earlier), they might be persuaded to fish on vacation if fishing is a *planned* activity during their vacation.

License discounts would also appear, based on the survey results, to help with nonresident license sales, as a discount on a license was the top-ranked thing that would make people more interested in hunting and fishing in Maryland. Putting this together with other findings suggest that making a discount that includes family and friends as well would be effective for hunting outreach (because being with family and friends is a top motivation for hunting), and linking the discount to vacation packages would be effective for fishing outreach.

As alluded to above, vacation packages that include hunting or fishing were top-ranked items in the series of questions about things that would encourage participation in these activities. However, the evidence suggests that participation in those activities is not spur of the moment. The effort should encourage prospective hunters and anglers to plan hunting and fishing as part of their vacation, not as an “impulse buy” so to speak.

Finally, access was an important issue for potential hunters and anglers in the survey. Access includes the opportunities to safely and cost-effectively use private and public lands. This is particularly important among non-waterfowl hunters who do not enjoy the large open public waters provided by the Chesapeake Bay and its many tributaries. In a broad sense, access also includes the provision of opportunities for hunting and fishing, with increasing “access” being afforded by longer or additional seasons. The results of several questions suggested that there is a greater interest in visiting Maryland for hunting if hunters were afforded longer or different seasons, including the opportunity to hunt on Sunday or hunt more Sundays than are currently offered in many counties in Maryland.

CROSSOVER PARTICIPATION

In this regard, “crossover” participation means hunters going fishing or anglers going hunting. As is well known, many hunters fish and many anglers hunt. The survey helped to quantify this, finding that hunters are much more likely to go fishing than anglers are to go hunting: 70% of the hunters also went fishing, while 39% of anglers went hunting. Therefore, it would appear that getting hunters to fish is an easier sell than getting anglers to hunt. Nonetheless, with substantial dual participation, both hunters and anglers are ripe markets for outreach in fishing and hunting.

An important aspect of crossover participation is the creation of a unique target market: those who do both hunting and fishing in their home state but do only one or the other in Maryland. In looking at those who had come to Maryland to hunt or fish, a large portion had done both activities in their home state. But most of those people who do both activities in their home state do only one of the two activities in Maryland (71% of hunters who participated in both hunting and fishing in their home state and who traveled to Maryland to hunt did *not* fish in Maryland; 92% of anglers who participated in both hunting *and* fishing in their home state and who traveled to Maryland to fish did *not* hunt in Maryland). It may be worthwhile to target fishing outreach to those hunters and do the same regarding hunting outreach to those anglers. (Note that the first—marketing fishing to hunters—will likely be a little more successful than the second. There is simply a larger proportion of hunters who fish than anglers who hunt.)

FRESHWATER VERSUS SALTWATER FISHING AND USE OF BOATS

The report notes that slightly more interest was expressed among the angler sample for saltwater fishing in Maryland than for freshwater fishing: 47% expressed the most interest in saltwater, while 36% expressed the most interest in freshwater. Therefore, while both are important, it may be that saltwater fishing should perhaps get a little more attention than freshwater in attracting nonresidents.

It is also noteworthy that most of the saltwater anglers in Maryland are also saltwater fishing in their home states. Therefore, not only is there a market for saltwater fishing among those who do not have access to it in their home states, there is a market among those who also go saltwater fishing in their home state.

Fishing from a boat, as opposed to doing so from the bank/shore or from a pier, was the top choice of anglers in the survey. These results, coupled with the results elsewhere in the survey, suggest two important groups: saltwater anglers fishing on the Chesapeake Bay or in other tidal waters via boat, and bass anglers in the larger rivers (like the Potomac) fishing for bass. Linking boating and fishing would appear to be effective in outreach.

PRIVATE LAND AND PUBLIC LAND

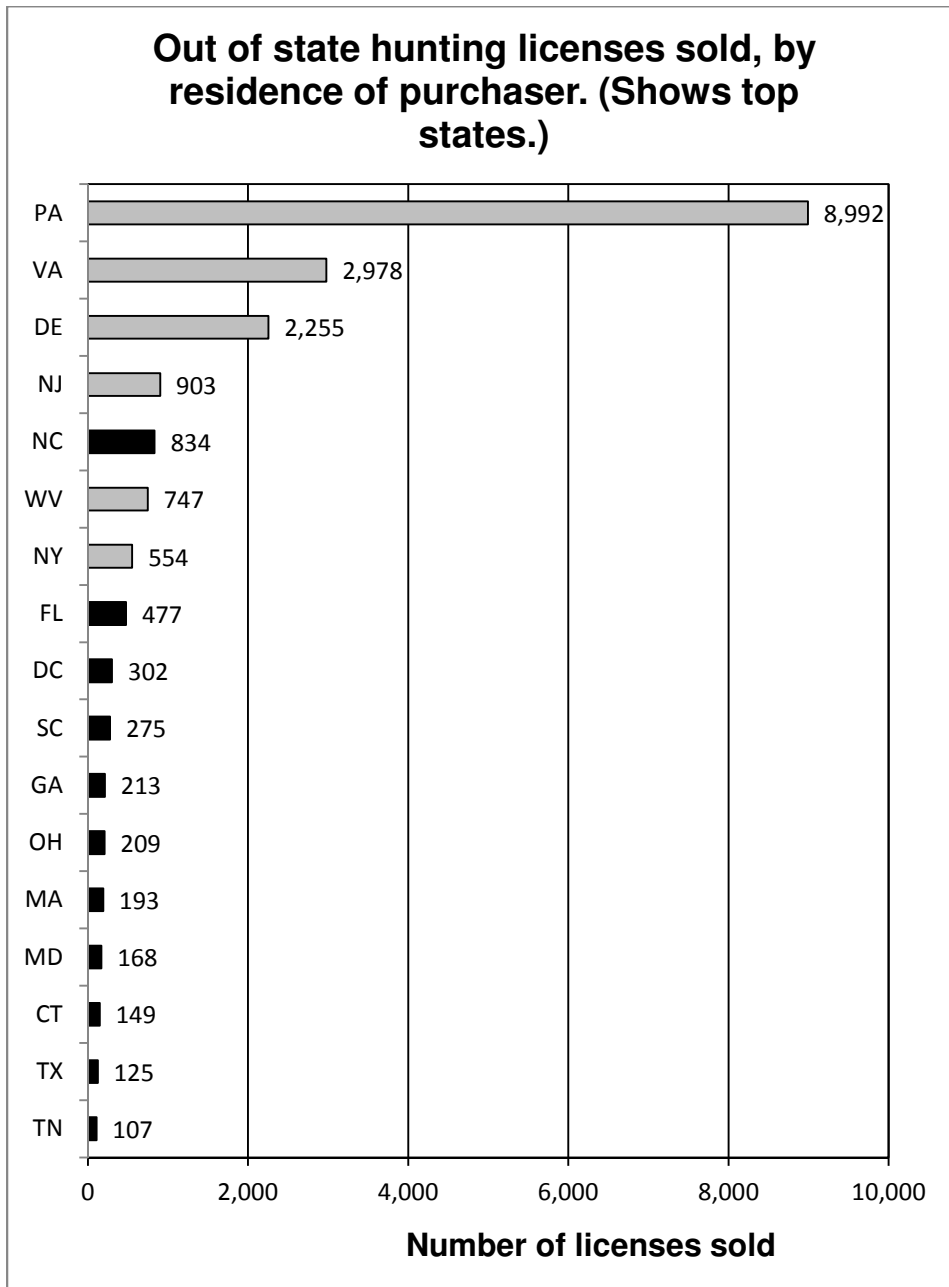
Most hunters in the survey, regardless of whether they participated in Maryland or not, indicated that they hunted mostly on private land. For this reason, private land programs will be integral to encouraging people to hunt in Maryland.

SOURCES OF INFORMATION

The Internet plays a huge role nowadays in the provision of information about hunting and fishing. It was the top source that hunters and anglers named when asked about what they use when looking for information about hunting and fishing. Nonetheless, almost 1 in 5 of these sportspeople use printed travel books and guidebooks, and about the same amount use television. Furthermore, piquing interest is different than providing information, so a reliance solely on the Internet would not be wise, but good, easy-to-use websites are important. Note that Facebook is an important form of social media for information, as well.

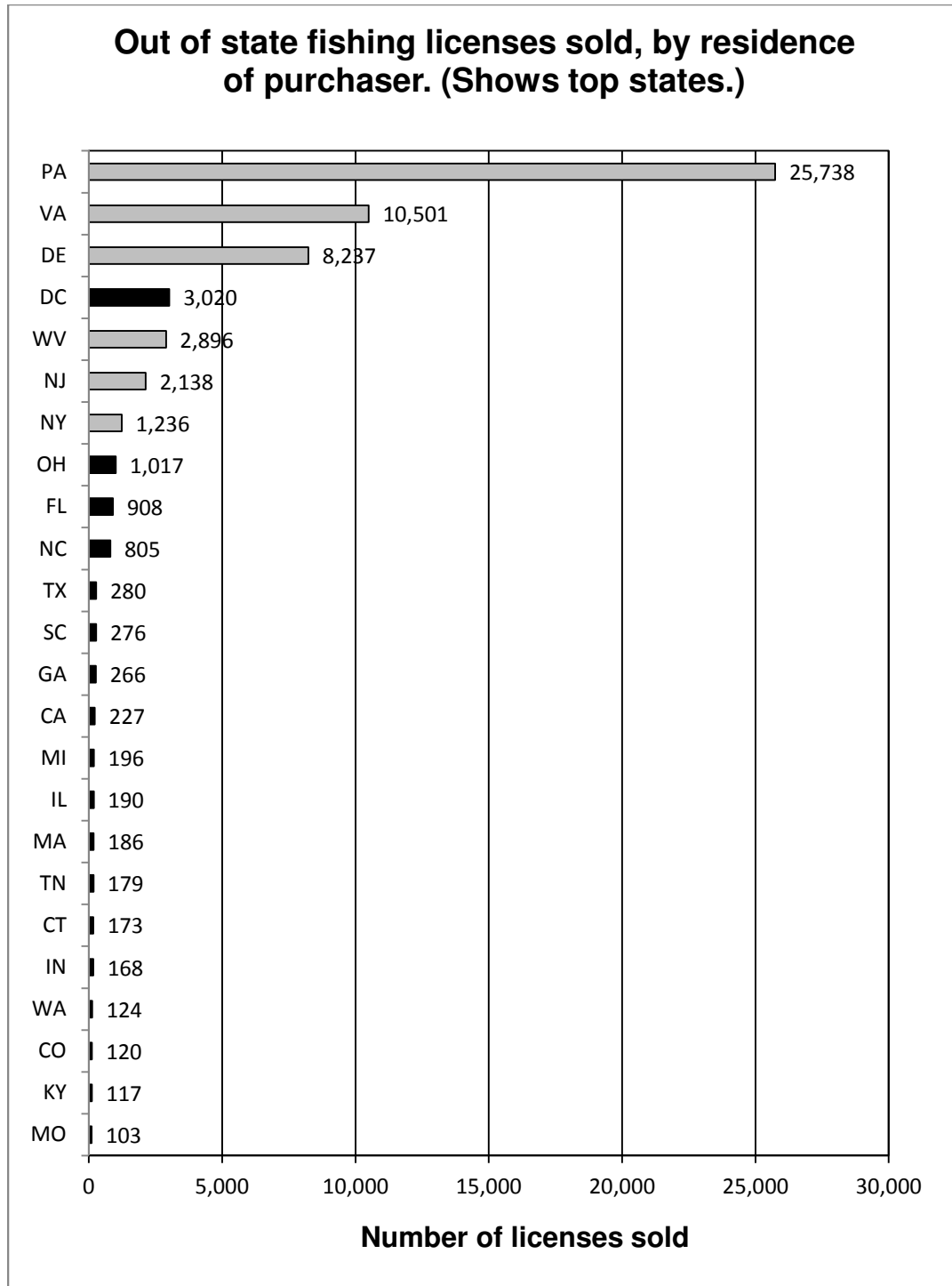
ANALYSIS OF LICENSE DATABASE

One analysis simply looked at the states of residence of Maryland nonresident license purchasers. Among hunters, Pennsylvania residents predominate: of the almost 21,000 nonresident hunting licenses sold for the 2013-2014 season, 43% of them were bought by Pennsylvania residents. Other important states are Virginia and Delaware for hunting license sales. Of states not in the study group (the study concentrated on Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia), North Carolina residents represent robust sales of 834 nonresident hunting licenses, or about 4% of the nonresident licenses sold in 2013-2014.



Study states are represented with gray bars.

Among anglers, Pennsylvania again dominates (with 43% of the nonresident licenses for the 2013-2014 season). Again, Virginia and Delaware are next in importance. Finally, the District of Columbia (5% of sales in 2013-2014) is important among the non-study states, as are Ohio, Florida, and North Carolina—all with more than 800 licenses sold.



Study states are represented with gray bars.

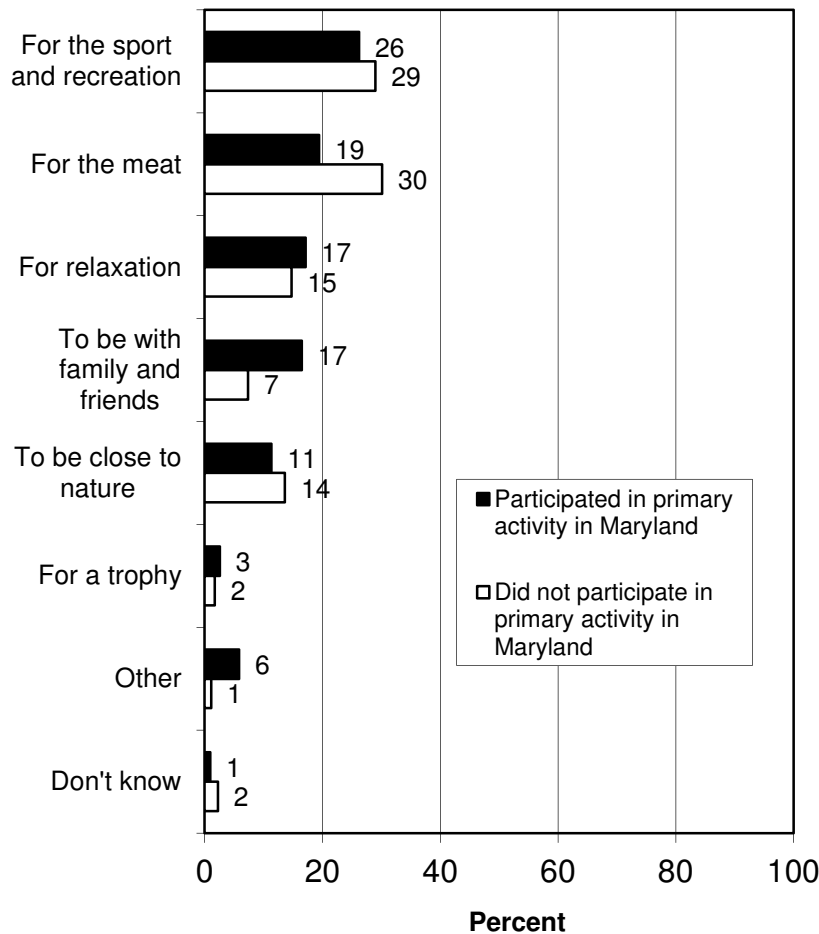
SURVEY RESULTS

MOTIVATIONS FOR AND CONSTRAINTS TO HUNTING AND FISHING

Motivations Overall

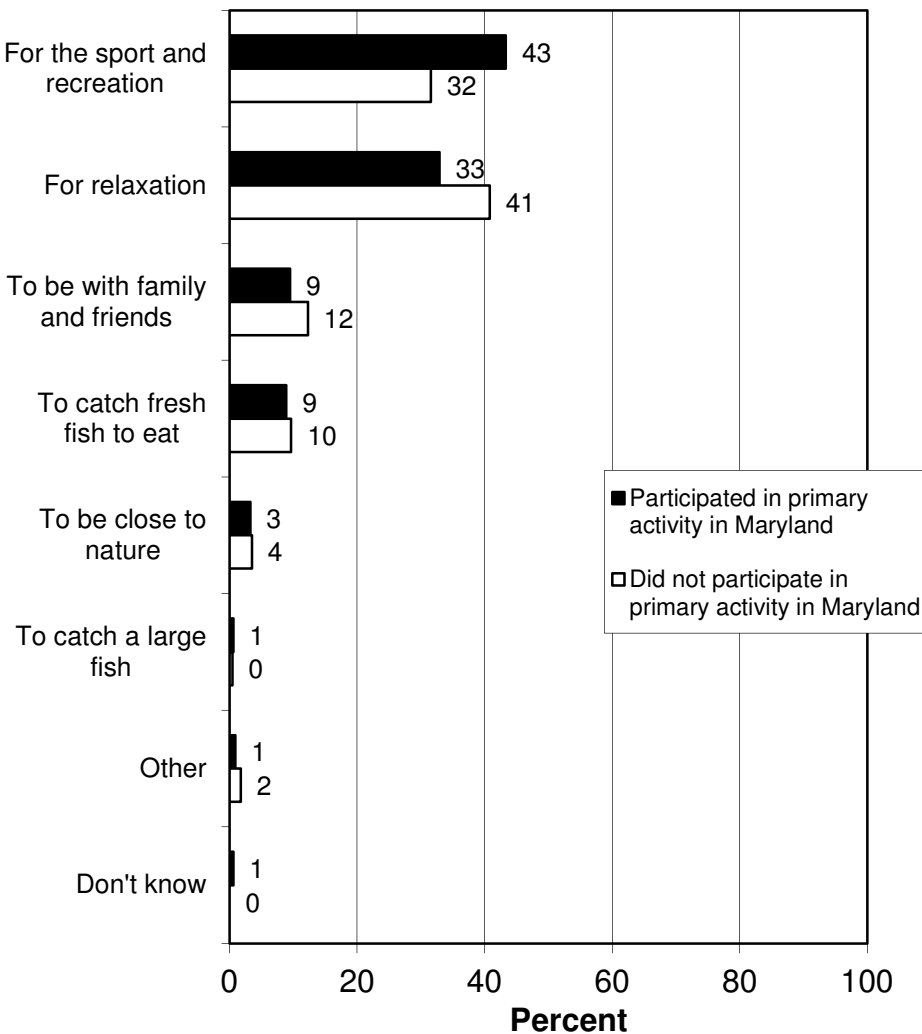
The motivations of hunters are quite different depending on whether they have visited Maryland or not. Those who have visited Maryland, compared to those who have not, are more likely to say that they hunt to be with family and friends (17% among those who visited Maryland versus 7% among those who had not visited Maryland). Otherwise, they are not greatly different in their motivations except in the response “for the meat”: on this, it would be expected that those who had *not* traveled to Maryland might find this more important, as the “did not travel to Maryland” group would include those who did not leave their home state. Not going out of one’s home state would intuitively be linked to those hunting for the meat because those who hunt for sustenance cannot justify the cost of going out of state to hunt.

Q17. What is your most important reason for hunting? (Asked of the hunter sample.)



Among anglers, “family and friends” as a reason to fish is about the same among those who visited Maryland to fish and those who did not (in contrast to the difference found in the hunter results). Instead, among anglers, there is a notable difference in the “sport and recreation” response. The evidence suggests that Maryland visitors are more motivated by the sport and recreation aspects of fishing: 43% of those who had fished in Maryland gave the response, “For the sport and recreation”; this compares to 32% of those who had not fished in Maryland.

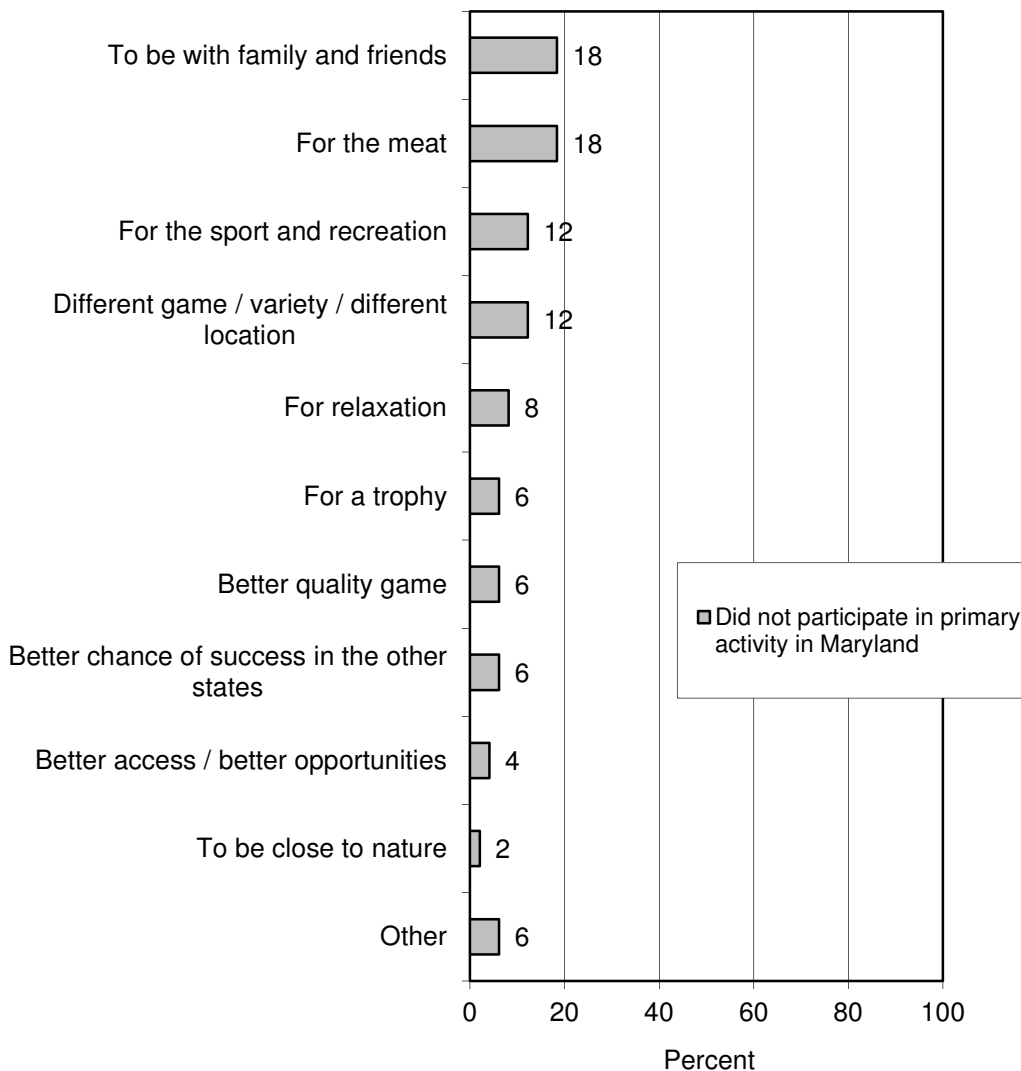
Q19. What is your most important reason for fishing? (Asked of the angler sample.)



Motivations for Hunting and Fishing in Other States

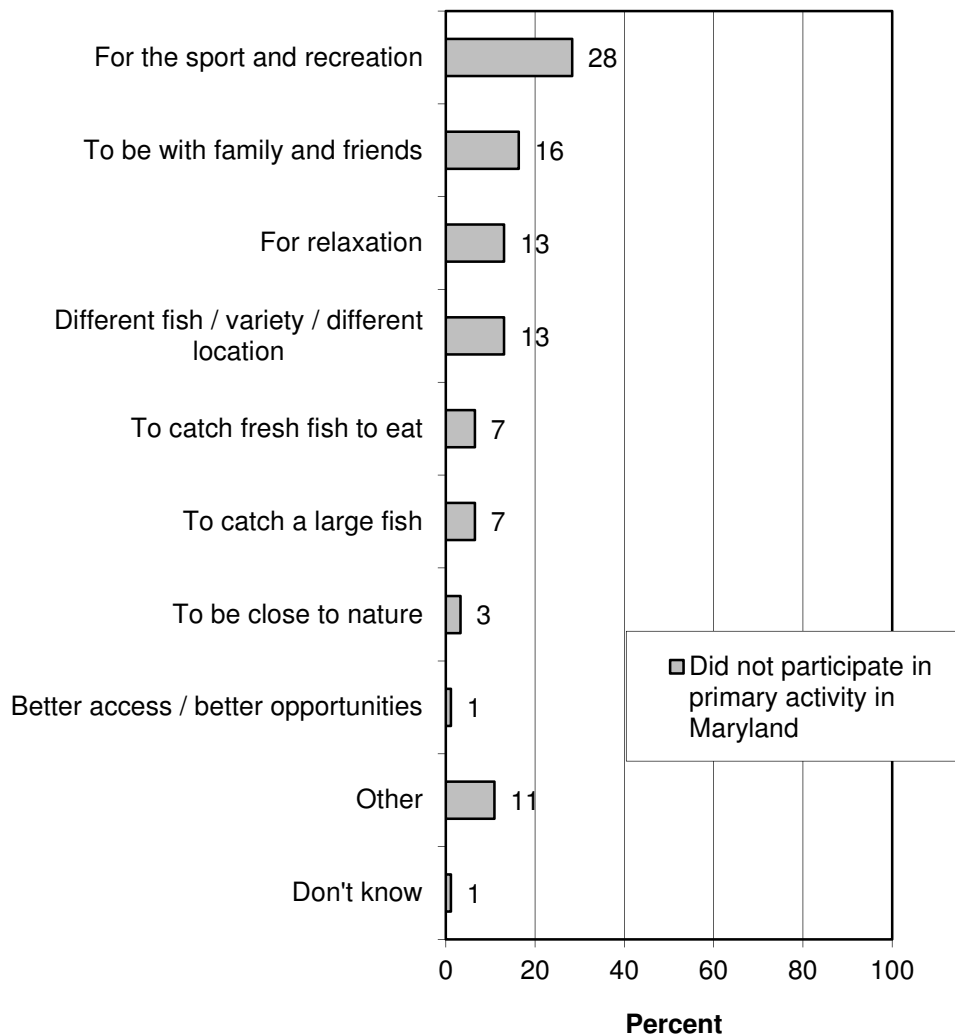
The top reasons that those hunters who hunted outside of their home state (other than Maryland) did so is to be with family/friends and to obtain meat. Next in the list are hunting for the sport/recreation and for variety of game/location.

Q117. What is your most important reason for hunting in [this other state / these other states]? (Asked of those who traveled to another state to hunt but did not travel to Maryland to do so.)



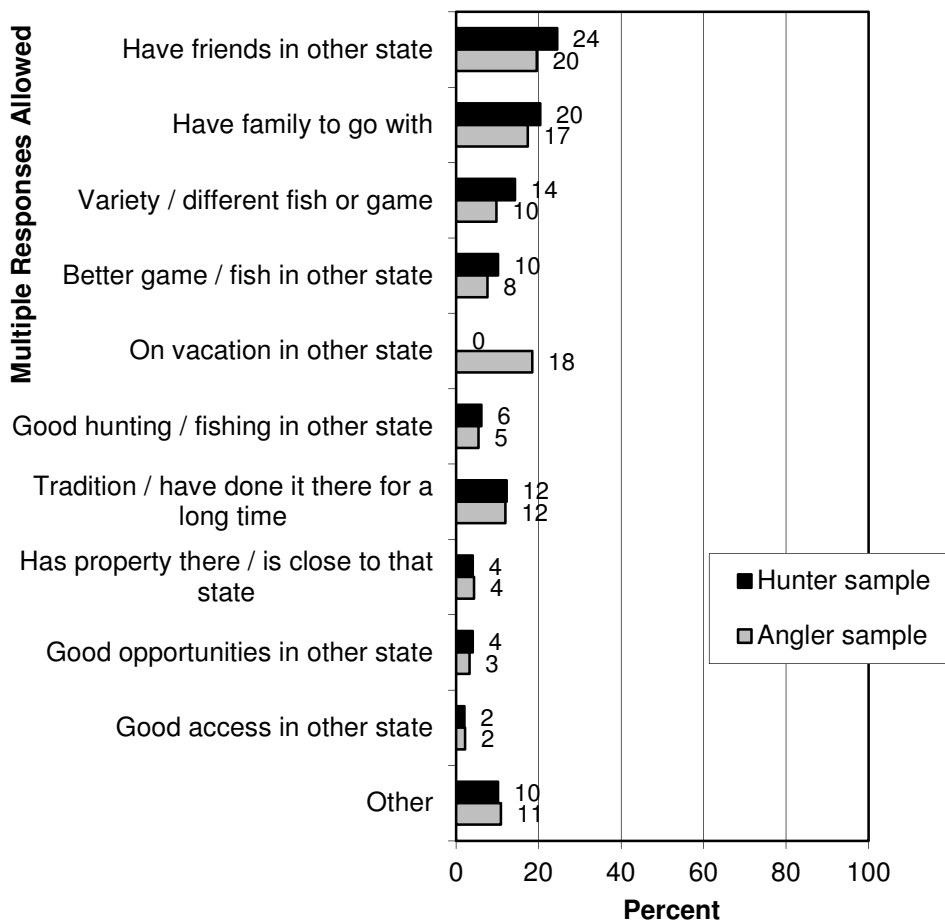
A similar question to the one discussed above asked anglers to name their most important reason for fishing in another state (other than Maryland): doing so for the sport/recreation is the top response, followed by being with family/friends, for relaxation, and for a variety of species/locations.

Q119. What is your most important reason for fishing in [this other state / these other states]? (Asked of those who traveled to another state to fish but did not travel to Maryland to do so.)



Prominent among the reasons for initiation into hunting or fishing in another state is having others to do the activities with: top reasons include having friends in the other state or having family to go with. Nonetheless, variety is also important, whether that be variety in species hunted or fished or variety in locations. There are a few who think the hunting and/or fishing is better in other states compared to their home state. Finally, among anglers, vacationing in the other state is also an important reason for starting to fish in that other state. Note that this question was asked of those who went to another state but not Maryland.

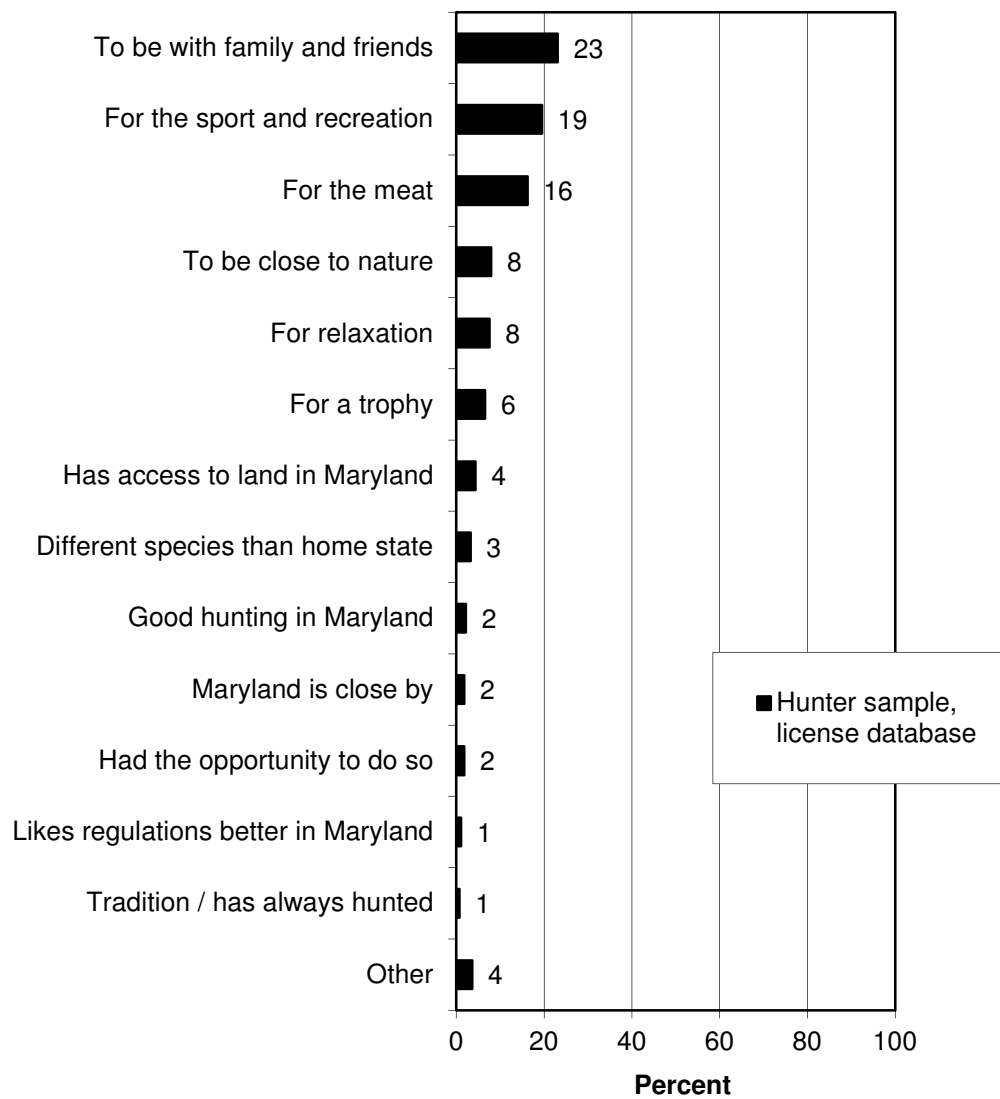
Q121. What influenced you to start [hunting / fishing] in [this other state / these other states]? (Asked of those who traveled to another state to [hunt / fish] but did not travel to Maryland to do so.)



Motivations for Hunting and Fishing in Maryland

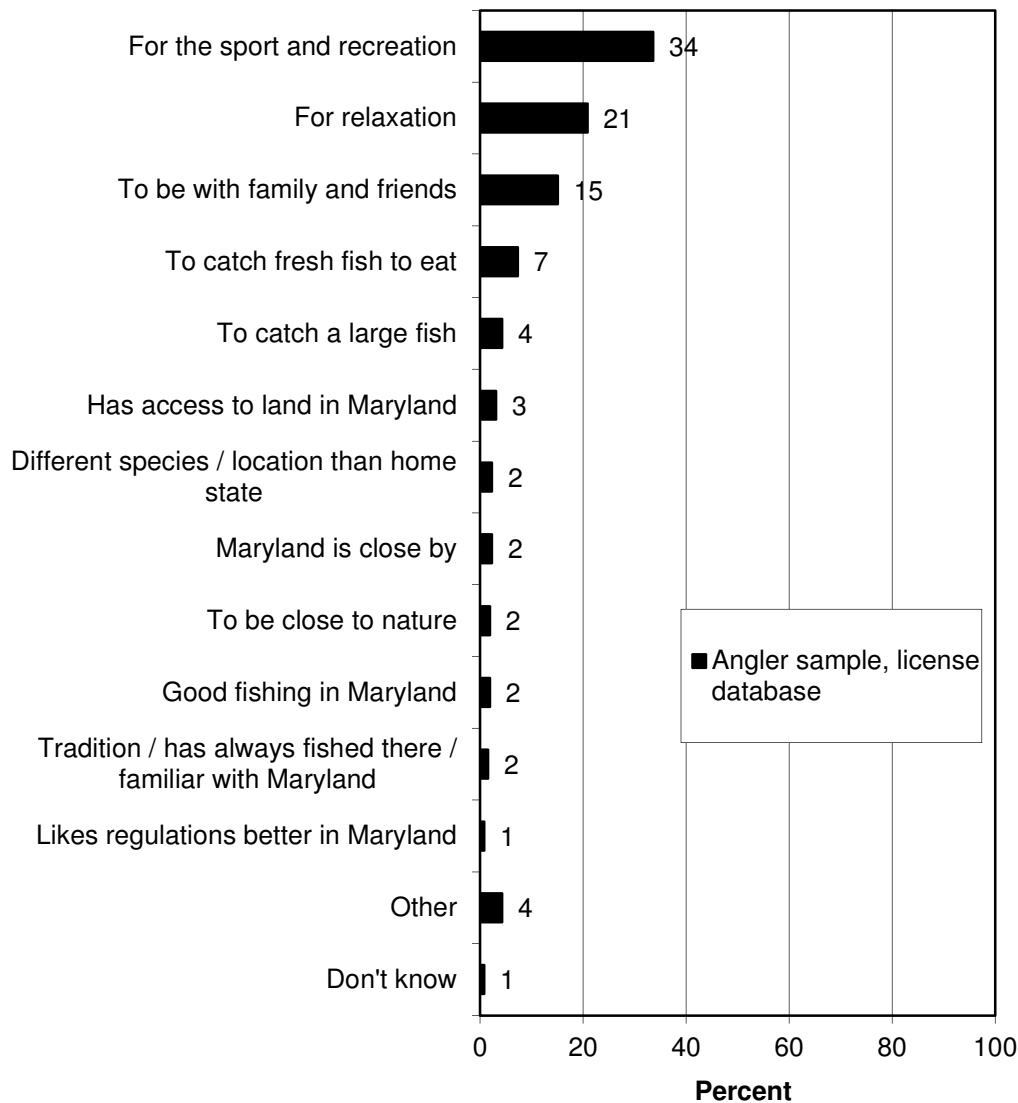
Licensed nonresident Maryland hunters were asked in an open-ended question to name their single most important reason for hunting in Maryland. Among these hunters, being with family and friends is the top reason (23% of them gave a reason related to this), closely followed by two more reasons: for the sport or recreation (19%) and for the meat (16%). Interestingly, 3% hunt Maryland because the state has opportunities for different species for hunting than their home state.

Q166. What is your most important reason for hunting in Maryland? (Asked of those who traveled to Maryland to hunt in the past 3 years.)



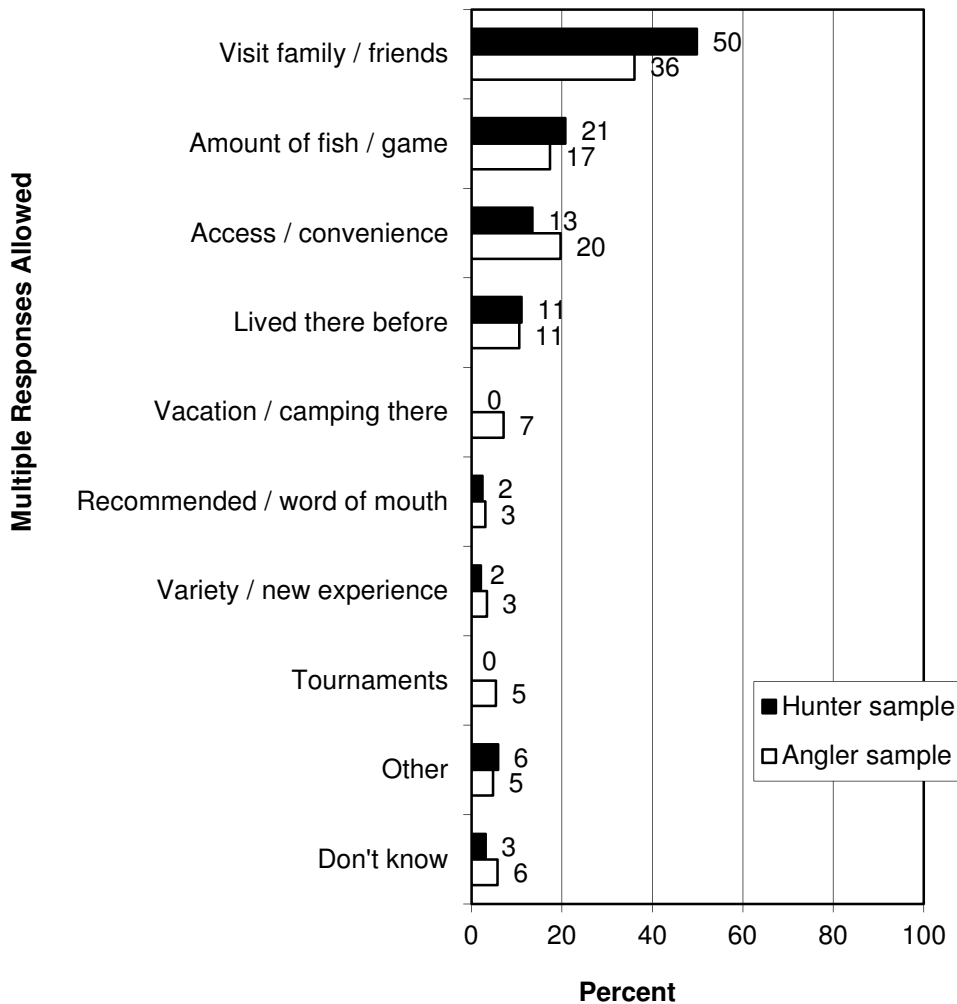
Licensed nonresident anglers differ from hunters. Their top reasons for fishing in Maryland are for the sport and recreation (34% gave a response related to this) and for relaxation (21%). To be with family and friends is the third-ranked reason, with 15% giving a response related to this. Again, different species (presumably including saltwater species for those anglers who do not have close access to saltwater in their home states) is *not* a huge reason: only 2% say that a primary reason they fish in Maryland is because it has different fish/different location than their home state.

Q168. What is your most important reason for fishing in Maryland? (Asked of those who traveled to Maryland to fish in the past 3 years.)



The survey asked those hunters and anglers who did those activities in Maryland to indicate what had influenced them to start hunting or fishing in Maryland. Among both groups (hunters and anglers, but particularly hunters), being with family and friends is the top reason that they started hunting/fishing in Maryland. (Note that people generally are initiated into hunting and to a lesser extent fishing by family, regardless of where they start, so this finding is not surprising.) However, both harvest success and good access/convenience figure prominently in reasons why people hunt/fish in Maryland.

Q170. What influenced you to start [hunting / fishing] in Maryland? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)

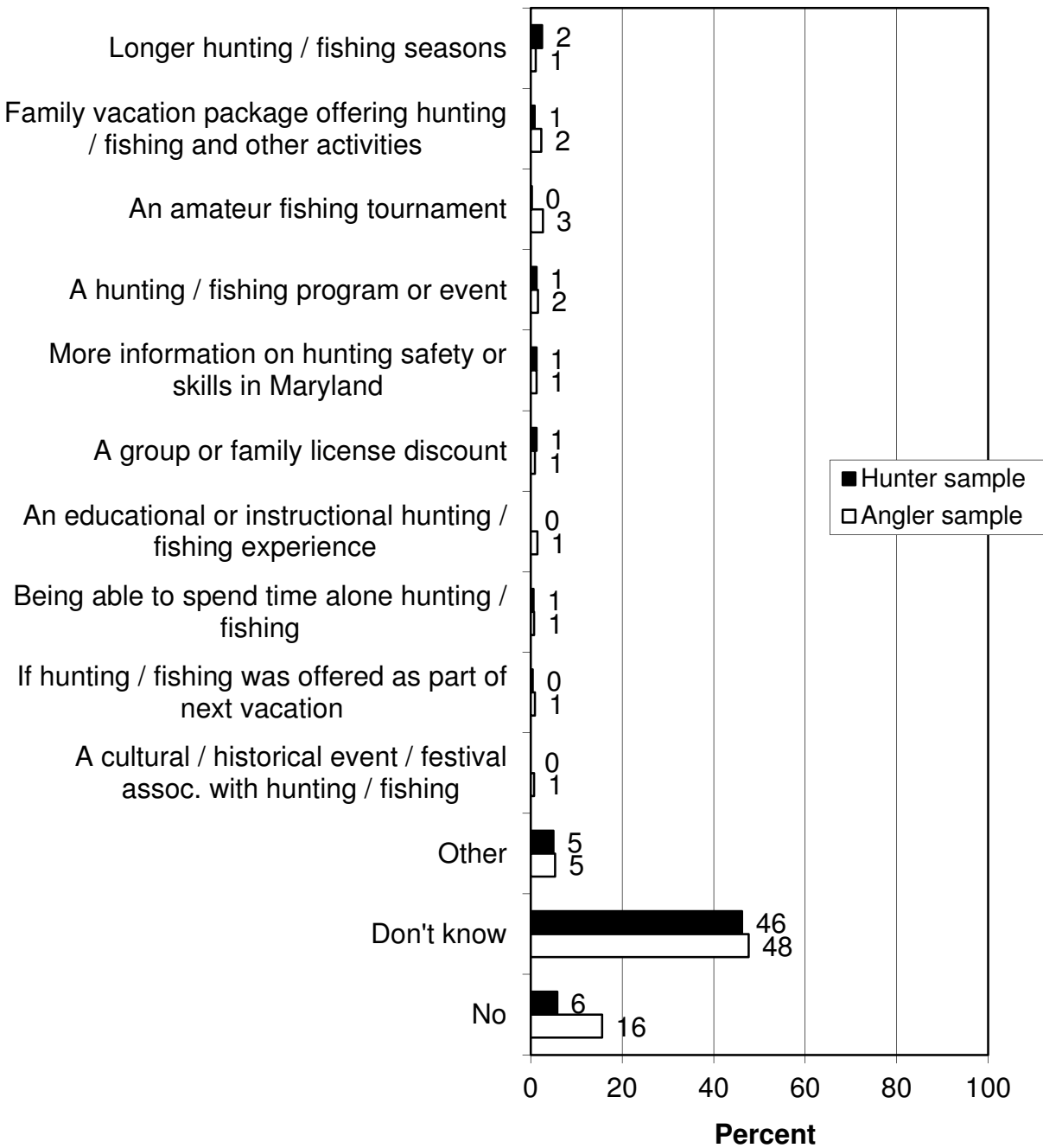


Another way to examine motivations is to see the things that would make hunters and anglers more interested in doing these activities in Maryland. Although license discounts are the top item among hunters (13% of them) and anglers (7%), an invitation from a friend is the second-ranked item among hunters (12%) and tied for the top item among anglers (7%). Of some importance is the provision of information on where and when to hunt and fish in Maryland and Sunday hunting. (Because of the extensive list of items given by respondents in this open-ended question, the results are shown on a two-part graph.)

**Q233. Are there any things that would make you more interested in going [hunting / fishing] in Maryland?
(Part 1 of 2)**

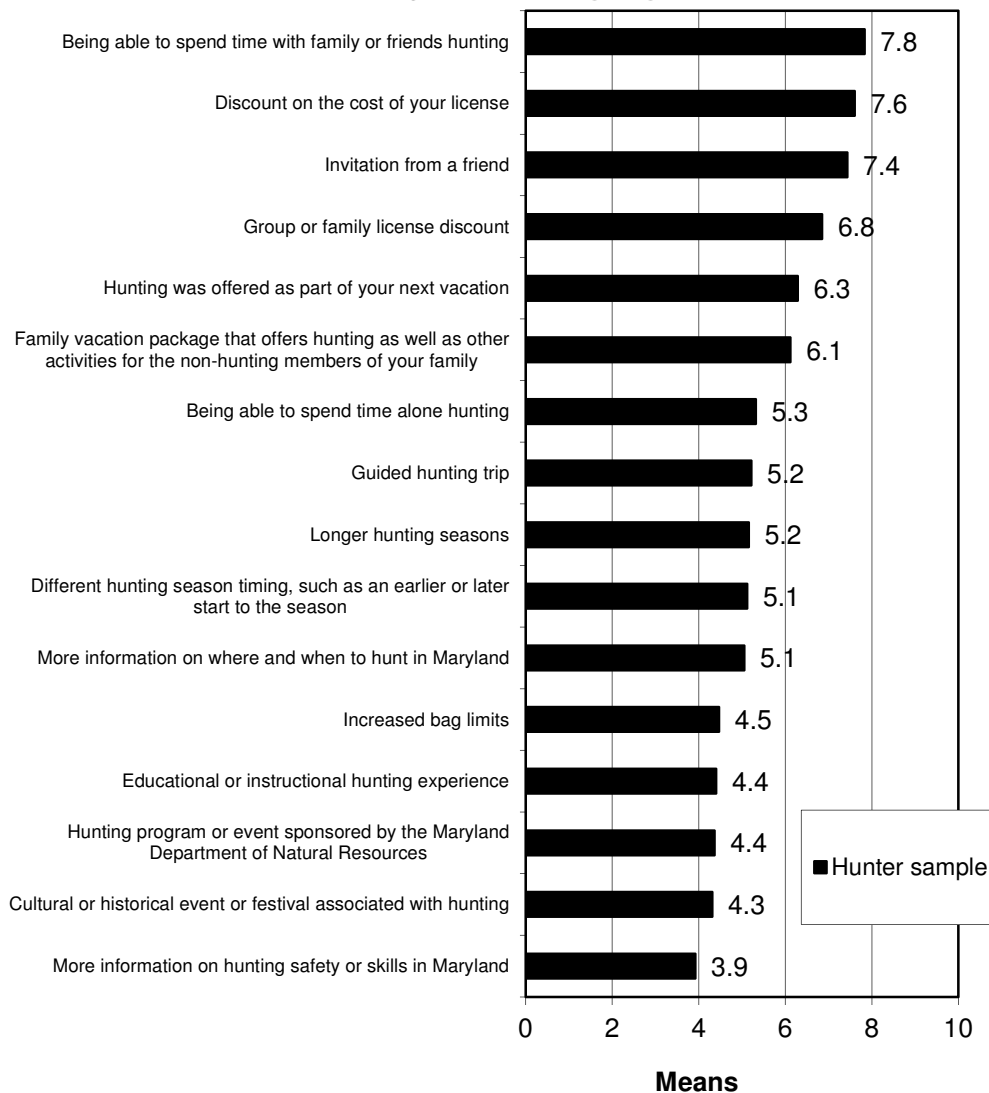


**Q233. Are there any things that would make you more interested in going [hunting / fishing] in Maryland?
(Part 2 of 2)**



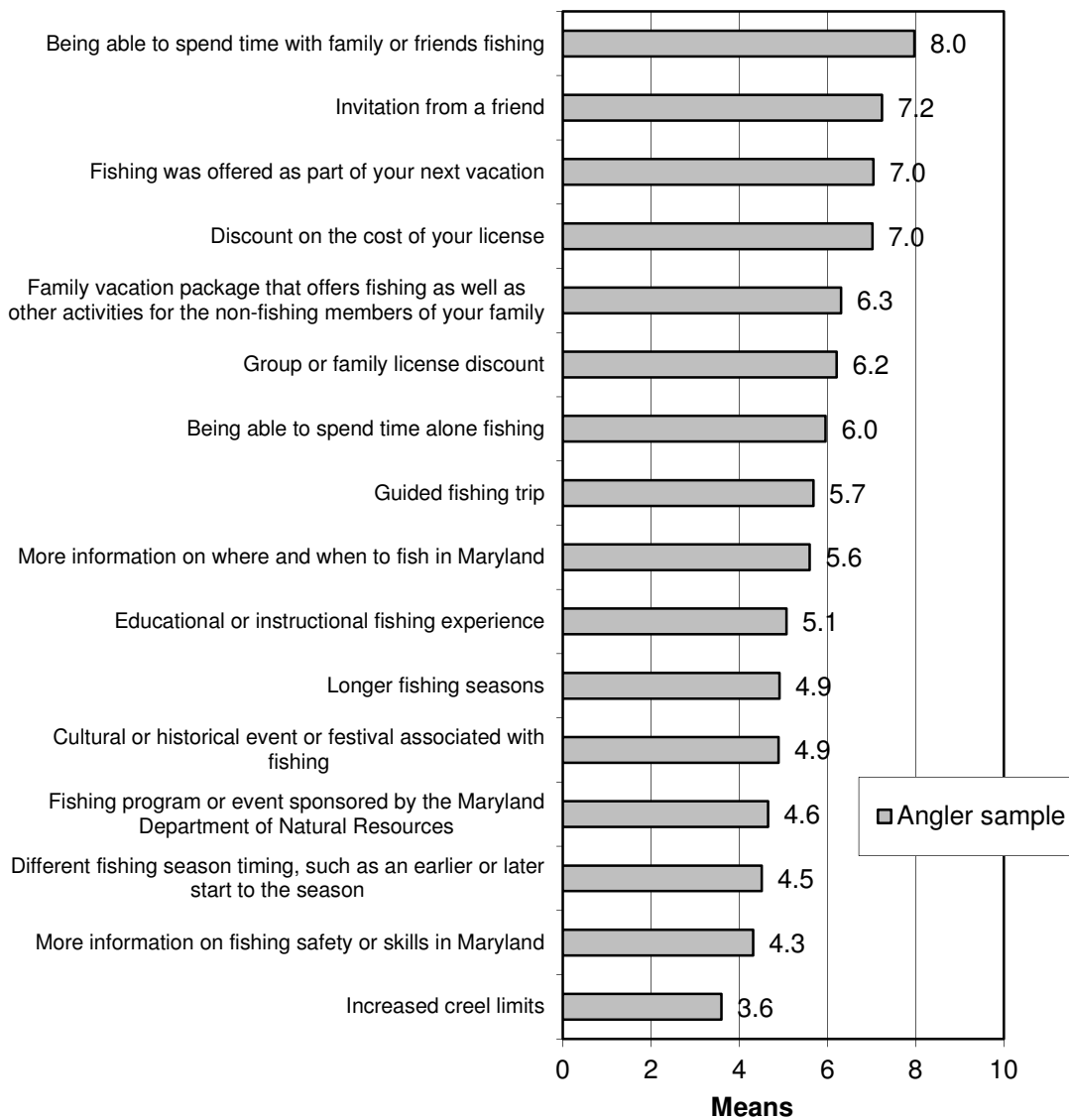
The survey asked a series of questions about 16 items that could potentially encourage a person to go hunting or fishing in Maryland; for each, respondents rated it from 0 to 10, with 0 being not at all encouraging and 10 being extremely encouraging. When examining the data, several tiers emerge. Among hunters, three items have a mean rating of more than 7.0, two of which involve friends or family (being able to spend time with family or friends hunting—7.8; invitation from a friend—7.4), but also in that top tier among hunters is a discount on the cost of the license (mean rating of 7.6). Discounts of sorts are included in the next tier, all with mean ratings in the 6.0 to 6.9 range: group/family license discounts, and two types of vacation packages.

Q246-264. How much would this encourage you to go hunting in Maryland, on a scale of 0 to 10, where 0 indicates it would not be encouraging at all and 10 indicates it would be extremely encouraging?



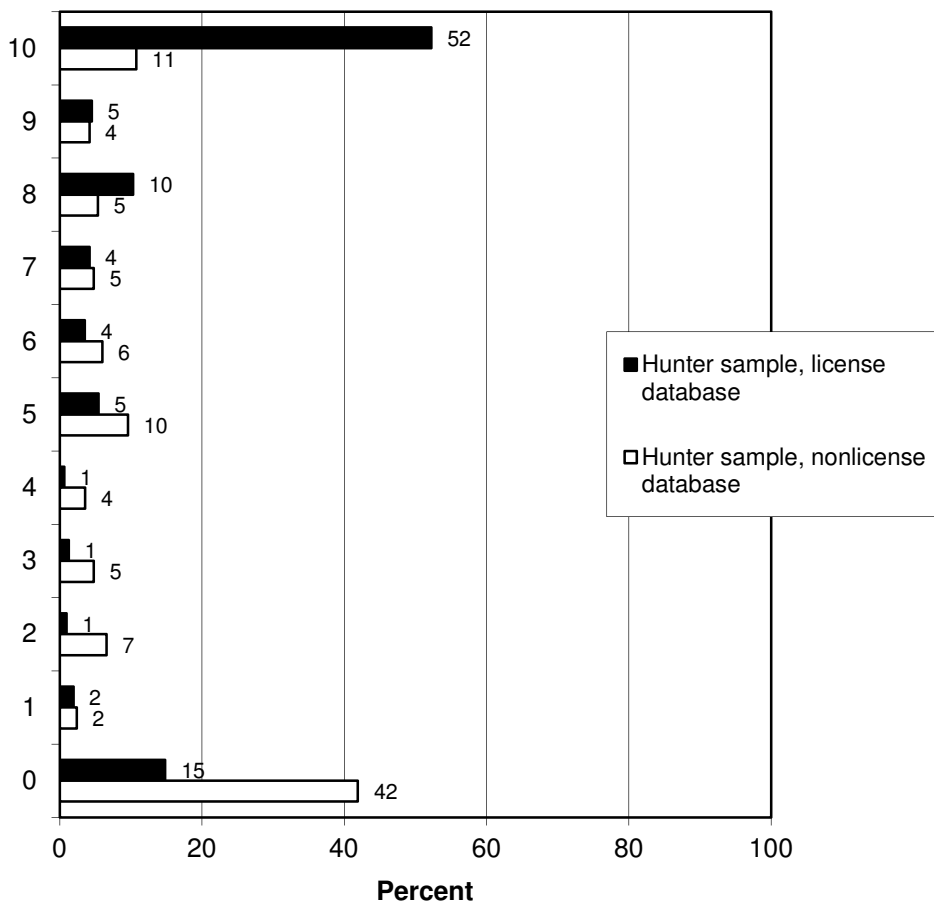
Among anglers, items that include family/friends are in the top tier, along with fishing being offered as part of the respondent's next vacation, and a license discount—all with mean ratings of at least 7.0. The next tier mirrors this somewhat, with a family vacation package and a group/family license discount being in that tier.

Q246-264. How much would this encourage you to go fishing in Maryland, on a scale of 0 to 10, where 0 indicates it would not be encouraging at all and 10 indicates it would be extremely encouraging?



One question looked at the likelihood that offering Sunday hunting would encourage nonresident hunters to come to Maryland. The results show that a majority of licensed hunters would be extremely likely to hunt in Maryland if the state increased or offered more Sunday hunting opportunities.

Q266. If Maryland increased or offered more Sunday hunting opportunities, how likely would you be to go hunting in Maryland in the next 3 years, on a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely? (Asked of the hunter sample.)



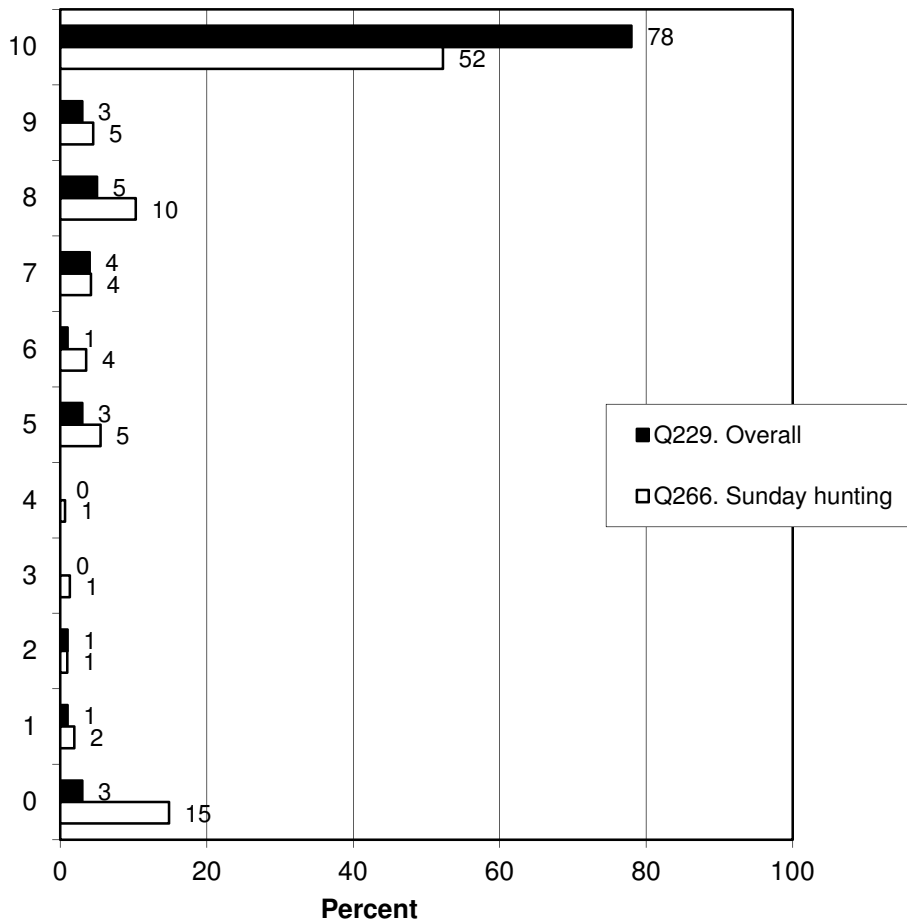
Each of these groups (hunters from the Maryland license sample—by definition these people had previously been to Maryland to hunt; and hunters from the nonlicensed sample—hunters from surrounding states who had, for the most part, not been to Maryland to hunt) had their responses compared on this question and a prior question that had asked about the likelihood to hunt in Maryland. The prior question put no conditions on the question, making it a baseline question. Among hunters in the license sample, offering Sunday hunting did not increase their stated

likelihood to go hunting in Maryland (see graph below); however, more than three quarters of them say it is extremely likely that they will go hunting in Maryland in the next 3 years, and half of them say it is extremely likely that they will hunt in Maryland if Sunday hunting opportunities are offered or increased. Not surprisingly, among the nonlicensed sample of hunters (most of whom have not previously hunted in Maryland), only a small proportion appear to be motivated to hunt in Maryland because of Sunday hunting opportunities (see graph on the following page). Nonetheless, to the basic question on Sunday hunting as an additional value to nonresident hunters, the results of other questions in the survey show that Sunday hunting was among the top five things that would make hunters more interested in hunting in Maryland.

Q229. How likely are you to go hunting in Maryland in the next 3 years, on a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely?

Q266. If Maryland increased or offered more Sunday hunting opportunities, how likely would you be to go hunting in Maryland in the next 3 years?

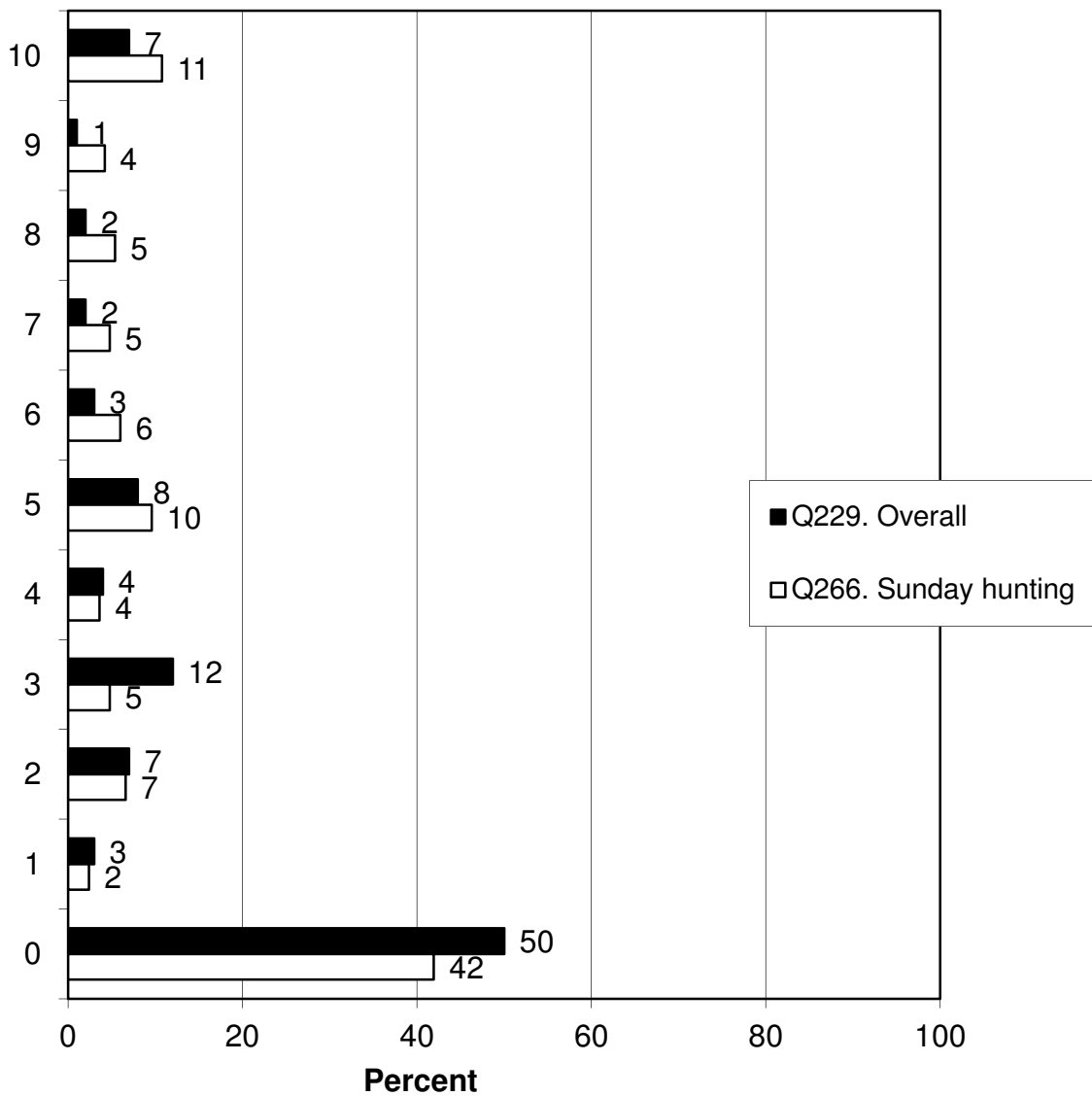
(Among the hunter sample, license database.)



Q229. How likely are you to go hunting in Maryland in the next 3 years, on a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely?

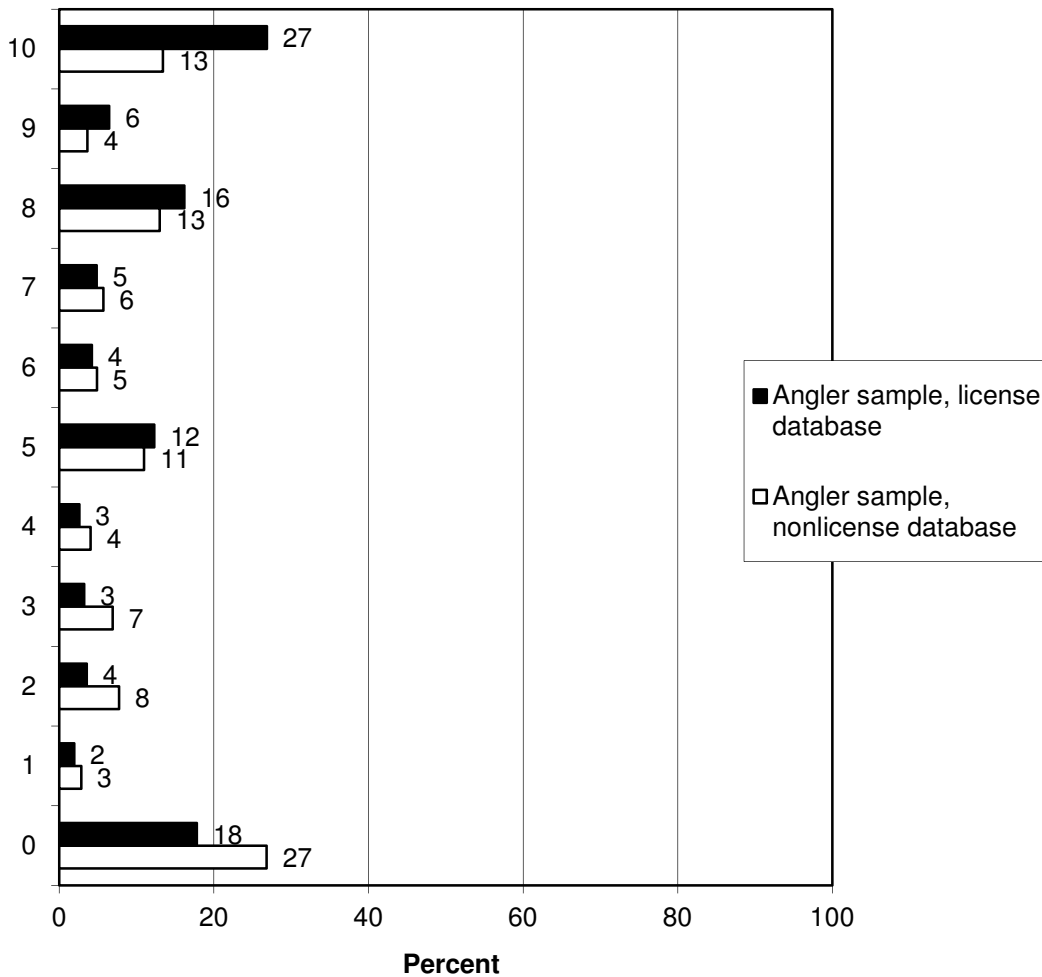
Q266. If Maryland increased or offered more Sunday hunting opportunities, how likely would you be to go hunting in Maryland in the next 3 years?

(Among the hunter sample, nonlicense database.)



Similar to the question about Sunday hunting, a question was asked of anglers about their likelihood to go fishing in Maryland if the state provided a complete list of all fishing guides and charter boat services in Maryland that would be easily accessible online. Again, the likelihood is greater among the license sample, meaning that the likelihood is greater among those who have been to Maryland previously to fish.

Q267. If Maryland provided a complete list of all fishing guides and charter boat services in Maryland that is easily accessible online, how likely would you be to go fishing in Maryland in the next 3 years, on a scale of 0 to 10 where 0 is not at all likely and 10 is extremely likely? (Asked of the angler sample.)

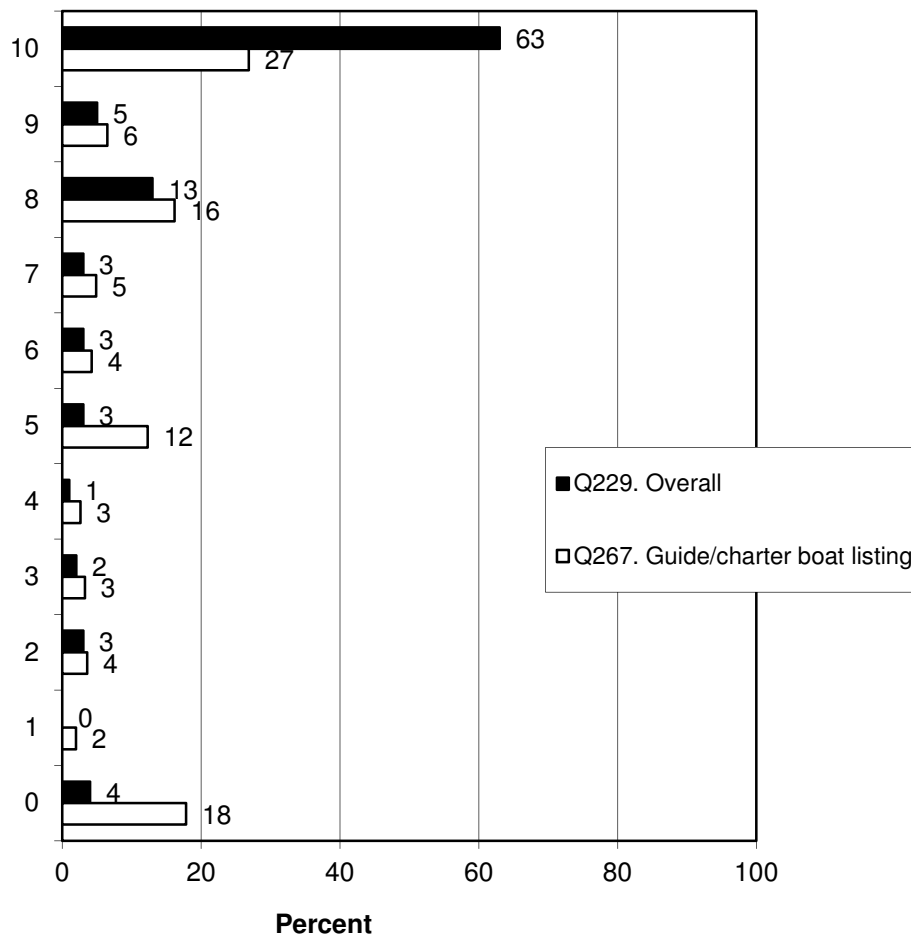


More importantly, however, is whether the offering of a guide/charter boat listing online would encourage fishing participation in Maryland among out-of-state anglers. A listing does not appear to be an effective draw, as the listing does not increase the likelihood of coming to Maryland to fish among the license sample (this page), and the listing does not markedly increase the likelihood among the nonlicensed sample (following page).

Q229. How likely are you to go hunting in Maryland in the next 3 years, on a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely?

Q267. If Maryland provided a complete list of all fishing guides and charter boat services in Maryland that is easily accessible online, how likely would you be to go fishing in Maryland in the next 3 years?

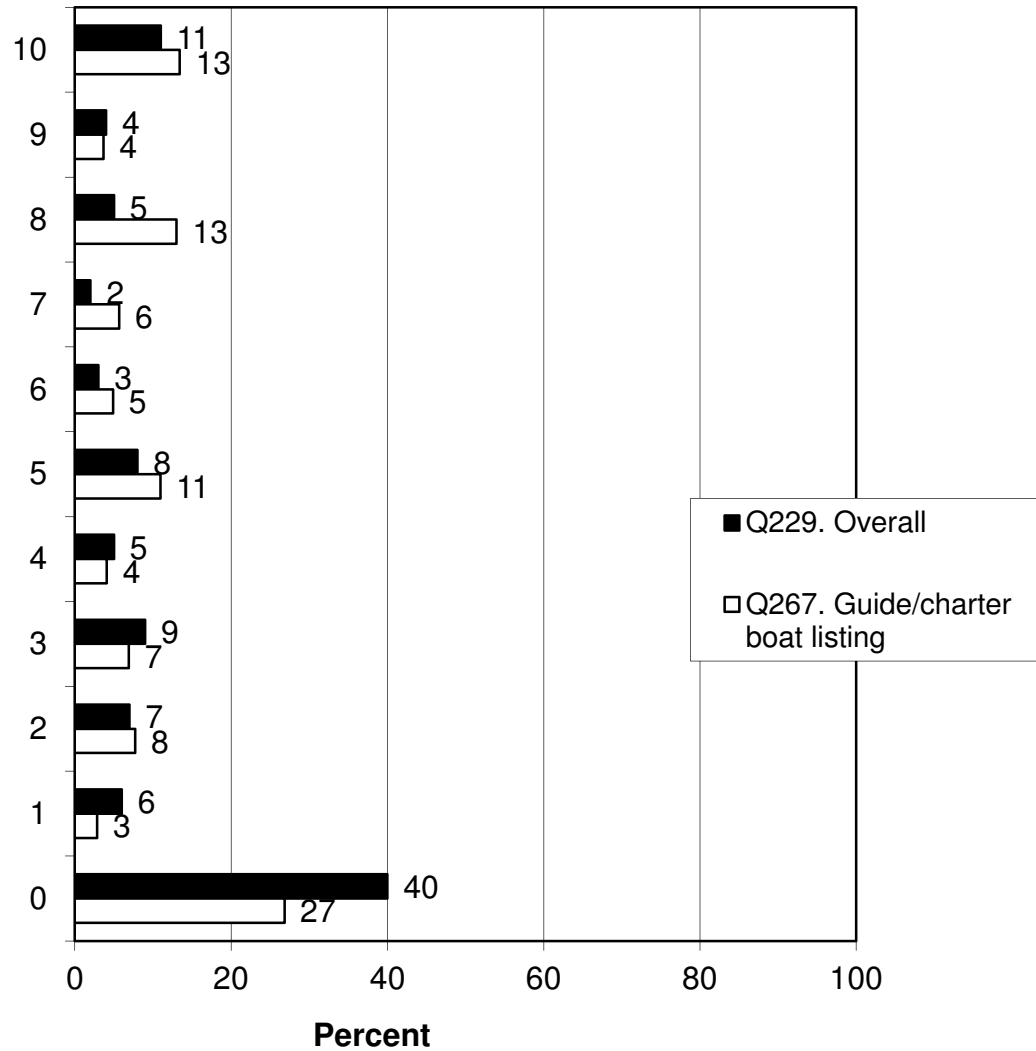
(Among the angler sample, license database.)



Q229. How likely are you to go hunting in Maryland in the next 3 years, on a scale of 0 to 10, where 0 is not at all likely and 10 is extremely likely?

Q267. If Maryland provided a complete list of all fishing guides and charter boat services in Maryland that is easily accessible online, how likely would you be to go fishing in Maryland in the next 3 years?

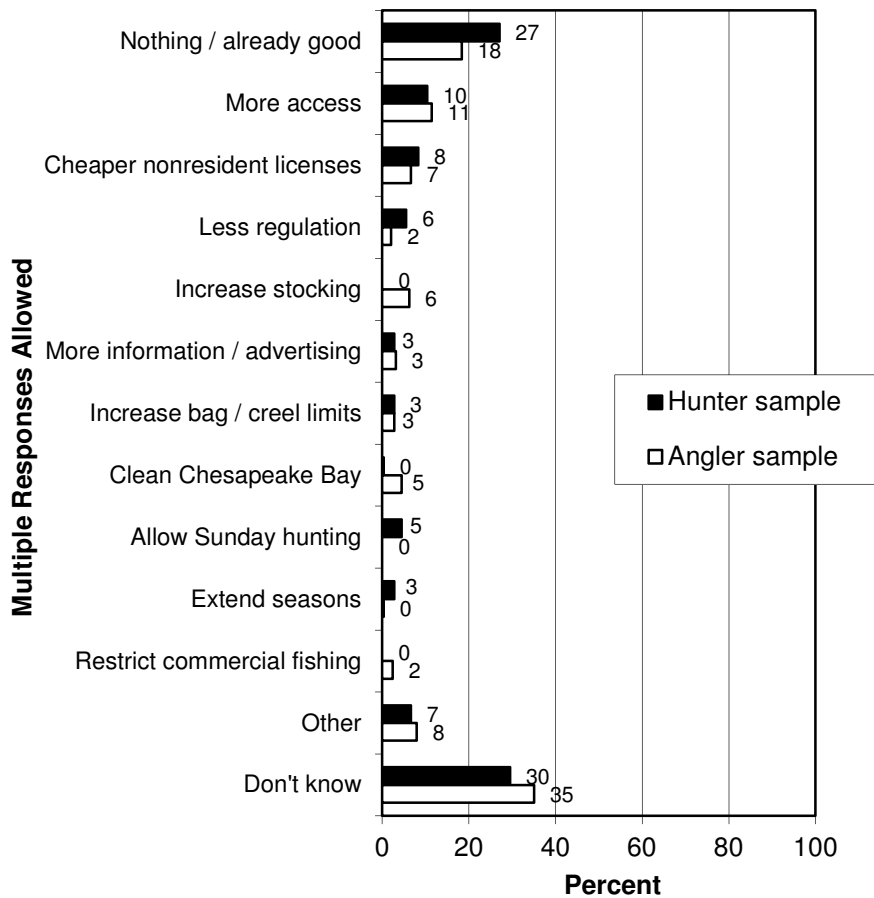
(Among the angler sample, nonlicense database.)



Constraints to Hunting and Fishing in Maryland

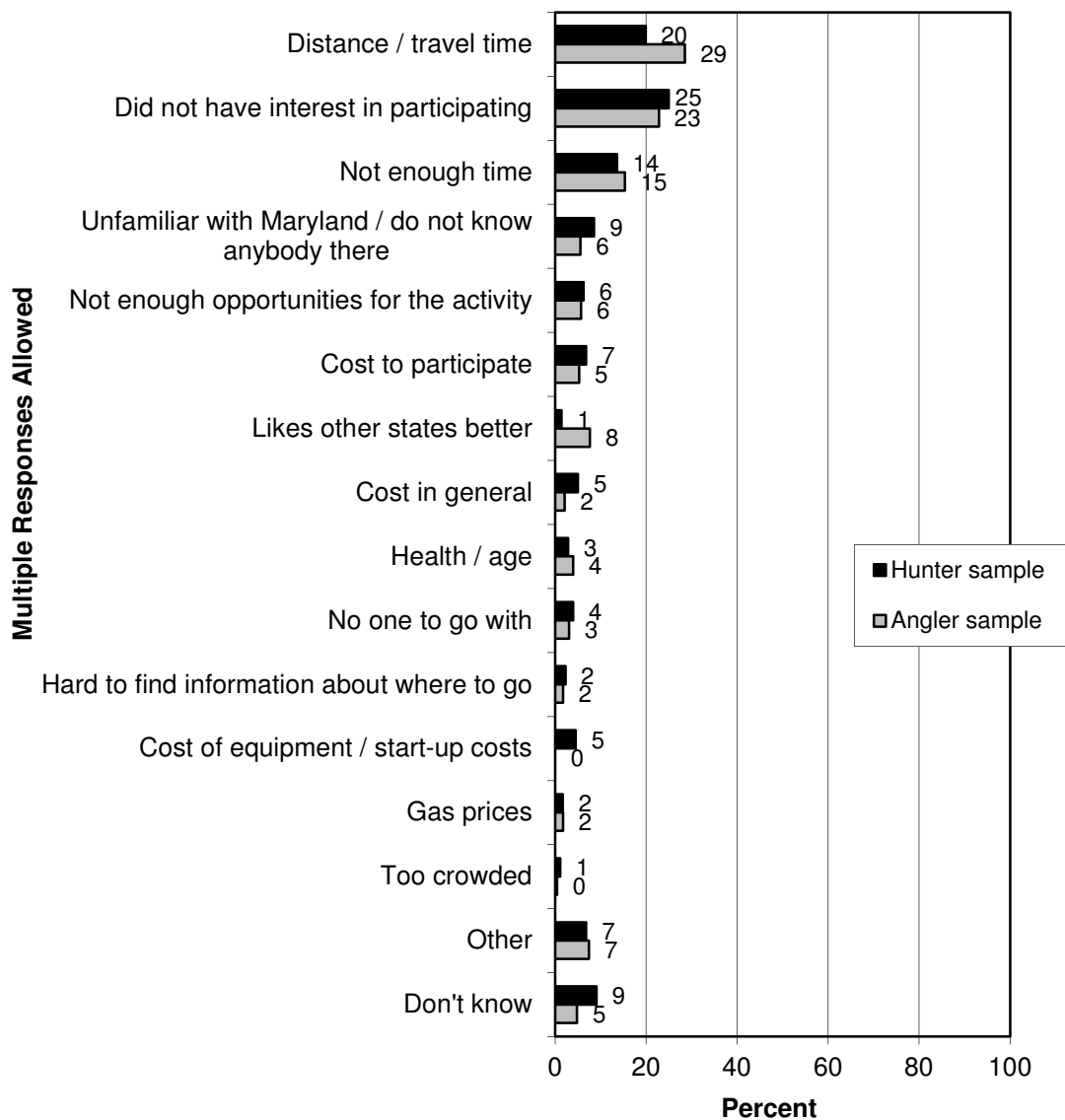
One question that sheds light on constraints asked hunters and anglers who had hunted or fished in Maryland to say how hunting and fishing in the state could be improved. The data suggest that access is a problem for about a tenth of the sample (10% of hunters and 11% of anglers who had done the activities in Maryland want to improve access). Cost is also a constraint to some, with 8% and 7% of hunters/anglers in the sample saying that they want cheaper nonresident licenses (cost was also a factor that showed up in the question previously discussed about what would make hunters/anglers more interested in going hunting/fishing in Maryland—the top item in that question, as discussed previously, was a discount on licenses). Otherwise, no other problems (as revealed by desired improvements) are prominent, all with less than 7% of respondents naming the suggested improvement.

Q176. How could [hunting / fishing] opportunities be improved in Maryland? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



Among those who have not gone to Maryland to hunt or fish, the distance/travel time is an important constraint, as is lack of time (a problem that travel distance exacerbates). However, 9% of the hunter sample and 6% of the angler sample (among those who did not travel to Maryland to hunt/fish) indicated that unfamiliarity with Maryland was a deciding factor in their *not* hunting or fishing in Maryland. Cost is a factor just below unfamiliarity, as well.

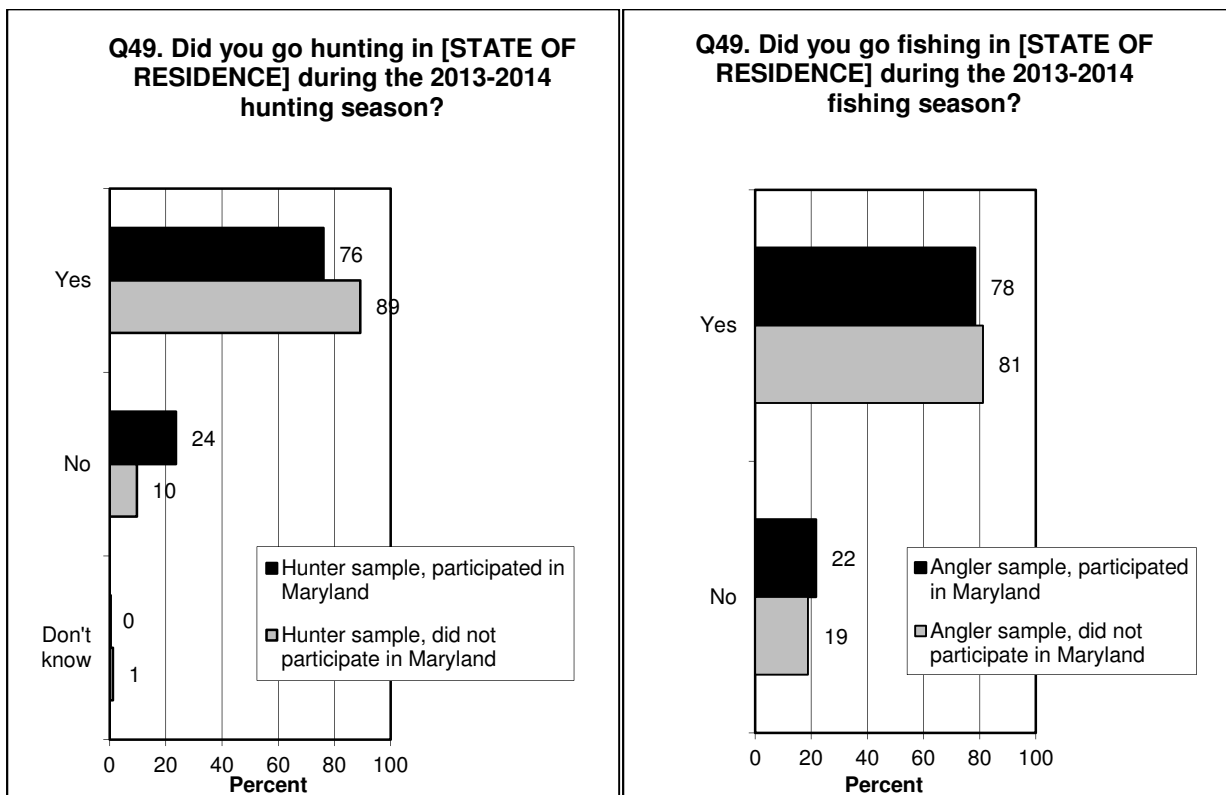
Q130. What is the main reason that you haven't gone [hunting / fishing] in Maryland? (Asked of those who did not travel to Maryland to [hunt / fish] or do not know if they did.)



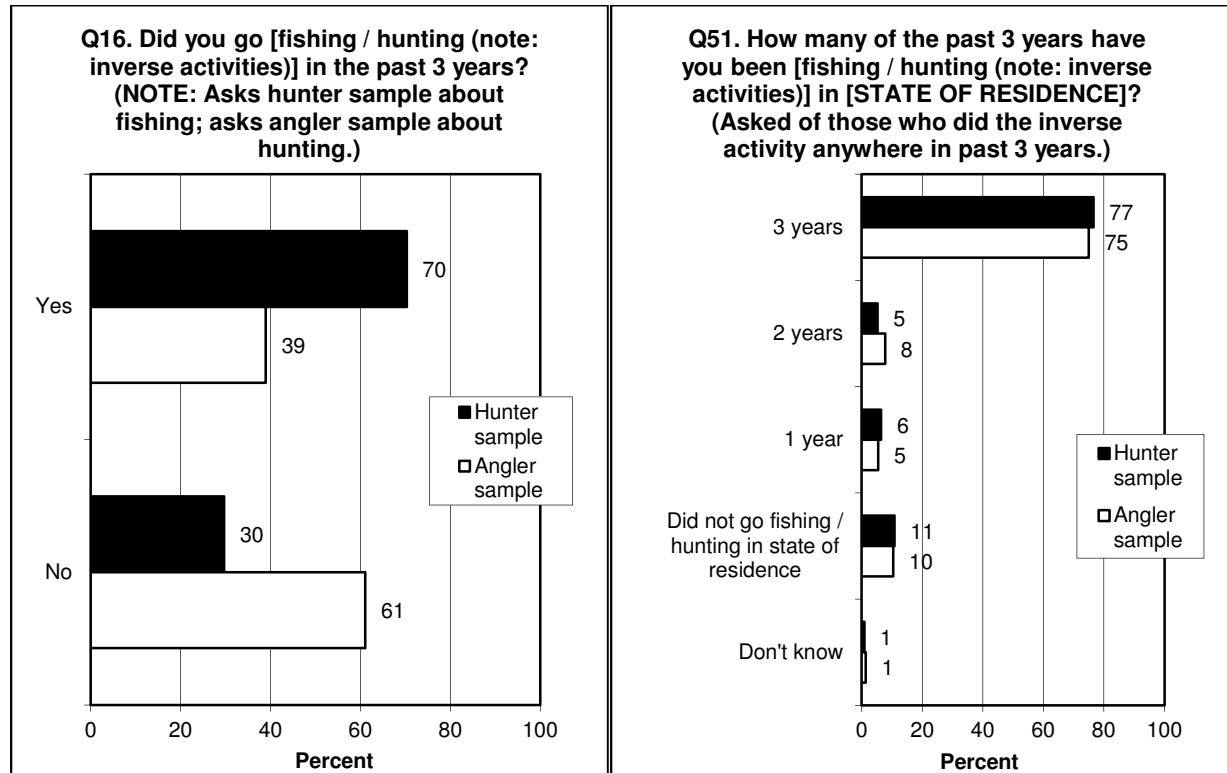
PARTICIPATION IN HUNTING AND FISHING WITHIN RESPONDENTS' STATES OF RESIDENCE, AND CROSSOVER PARTICIPATION IN FISHING (AMONG HUNTERS) AND HUNTING (AMONG ANGLERS)

Among the hunter sample who participated in hunting in Maryland, 76% had also participated in their state of residence, while 24% had not. Among those who had not participated in Maryland, 89% had participated in their state of residence; however, 10% of this group had not participated in their state of residence, meaning that they had gone to another state to hunt (but not Maryland).

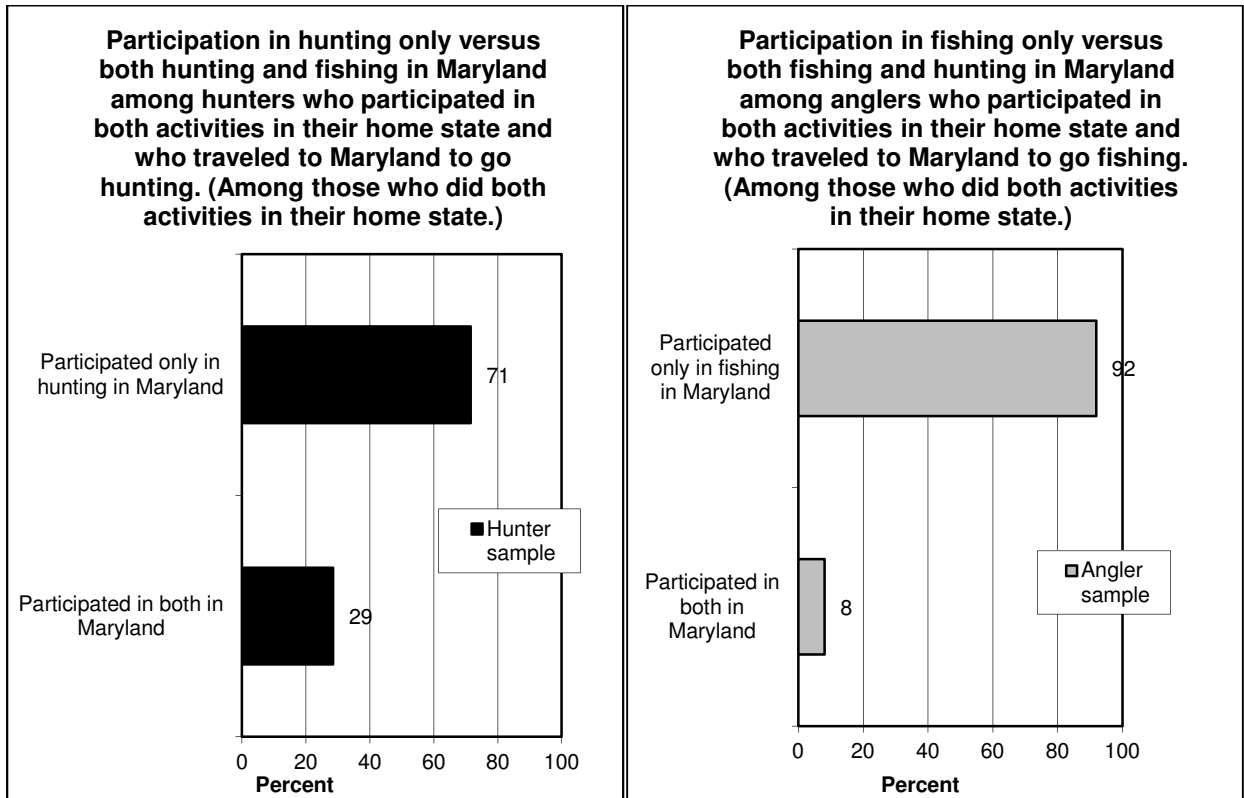
Among anglers, those who had fished in Maryland and those who had not done so are about the same in their tendency to fish in their home state. For both groups, about 1 in 5 had not fished in their state of residence, meaning that they went exclusively out of state to fish.



Question 16 shows that there is considerable crossover participation among the samples: 70% of the hunter sample had gone fishing in the previous 3 years, and 39% of the angler sample had gone hunting in that time. Question 51 shows that those who do crossover participation do so overwhelmingly in their home state (although not necessarily exclusively in their home state): only 10% to 11% did *not* do the crossover participation in their home state. That same question also demonstrates that those who do crossover participation are fairly avid (from 75% to 77% of them have done the crossover activity all 3 of the past 3 years in their home state).



Despite the considerable crossover participation, those who do both activities in their home states are *not* doing both activities when they come to Maryland. One analysis looked at those who had done both activities in their home state and had also come to Maryland to hunt or fish. Among those people, most of them did not do both activities in Maryland. The graph on the left shows that 71% of those who had done both activities in their home state and who came to Maryland to hunt did *not* do any fishing in Maryland—although they would be a presumably ripe market. Likewise, the percentage of anglers is 92% fishing in Maryland but not hunting, despite the fact that they both fish and hunt in their home state.

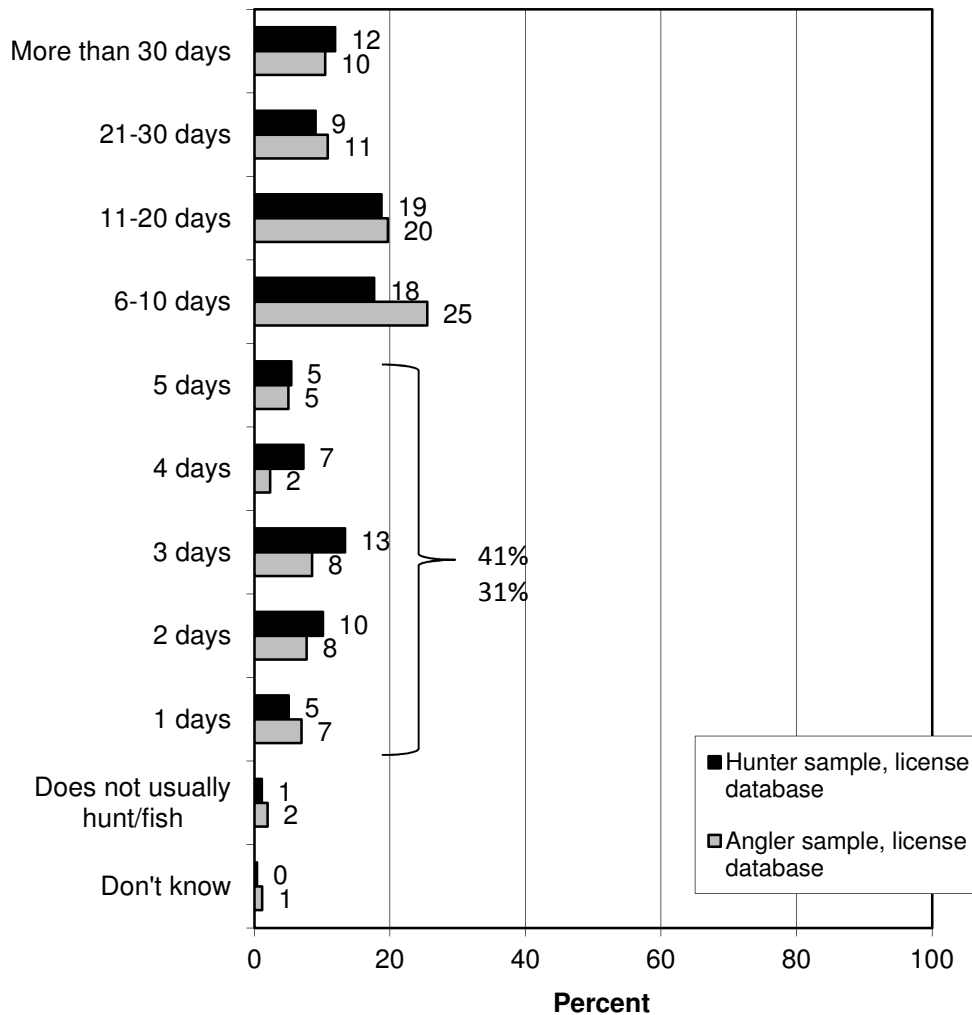


PARTICIPATION IN HUNTING AND FISHING IN MARYLAND

Much of the data in this section is useful for crosstabulations and to identify target markets. Nonetheless, the results of these questions of interest on their own.

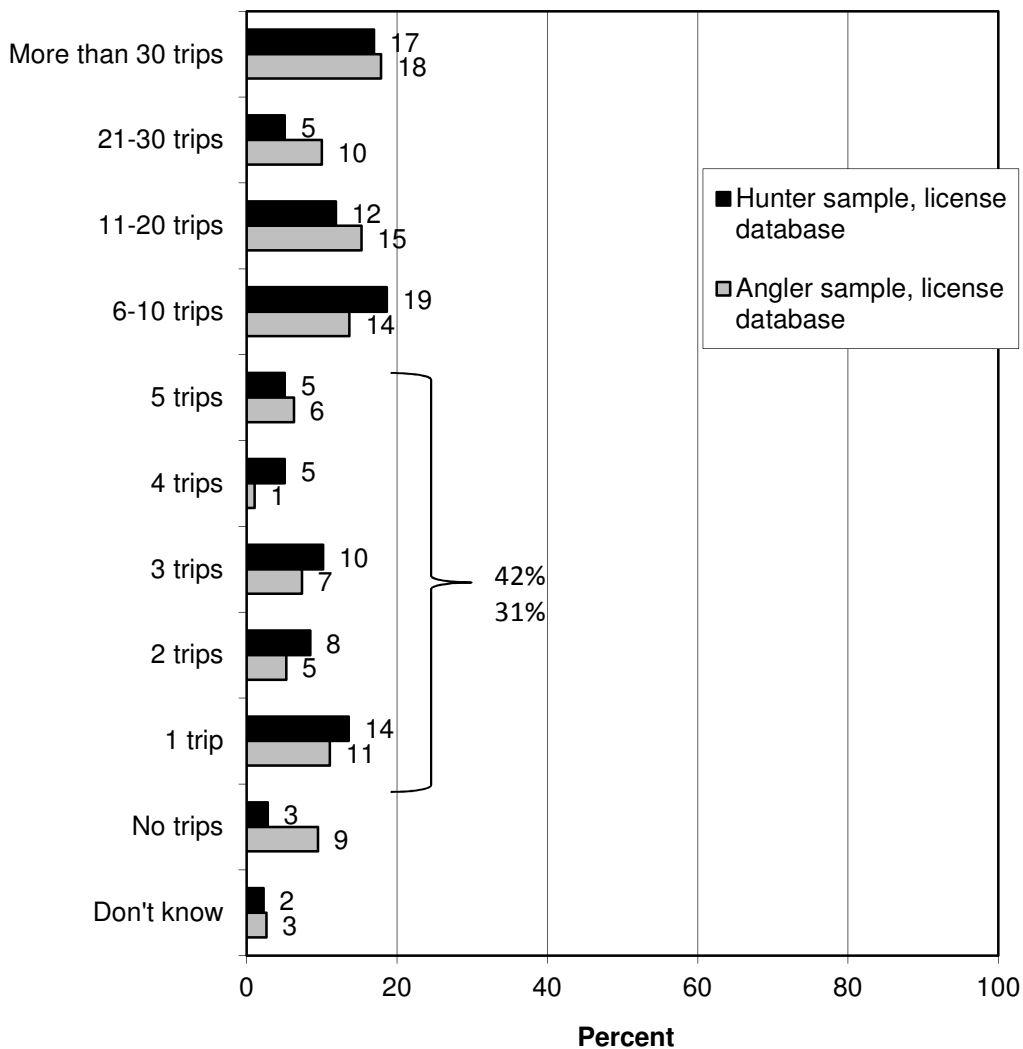
The typical number of days that hunters hunted and anglers fished in Maryland (among those who hunted/fished in Maryland in the past 3 years) is shown: 41% of hunters and 31% of anglers did so for 5 days or less; nonetheless, about a fifth of each group (21% of both groups) did so for more than 20 days.

Q140. How many days do you typically [hunt / fish] in Maryland each year? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



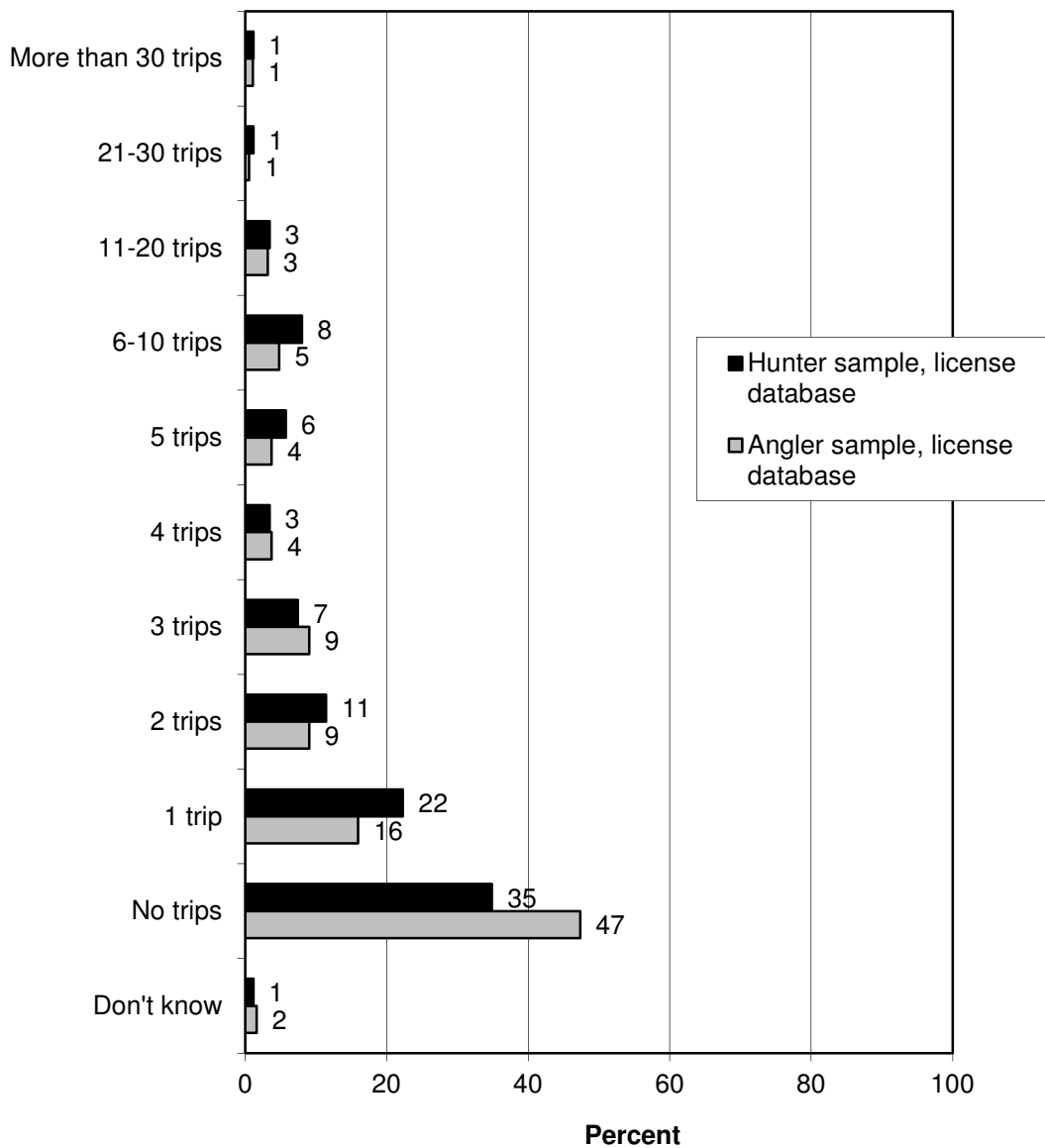
The survey asked about the number of trips that hunters and anglers had made to Maryland in the past 3 years (obviously asked only of those who had traveled to Maryland to hunt or fish). The responses run the gamut, from those who visited Maryland only once (14% of visiting hunters and 11% of visiting anglers) to those who made more than 30 trips (17% and 18%, respectively), as shown in the results to Question 199.

Q199. How many trips, including day trips and overnight trips, have you taken to Maryland in the past 3 years for which [hunting / fishing] was your main reason for going? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



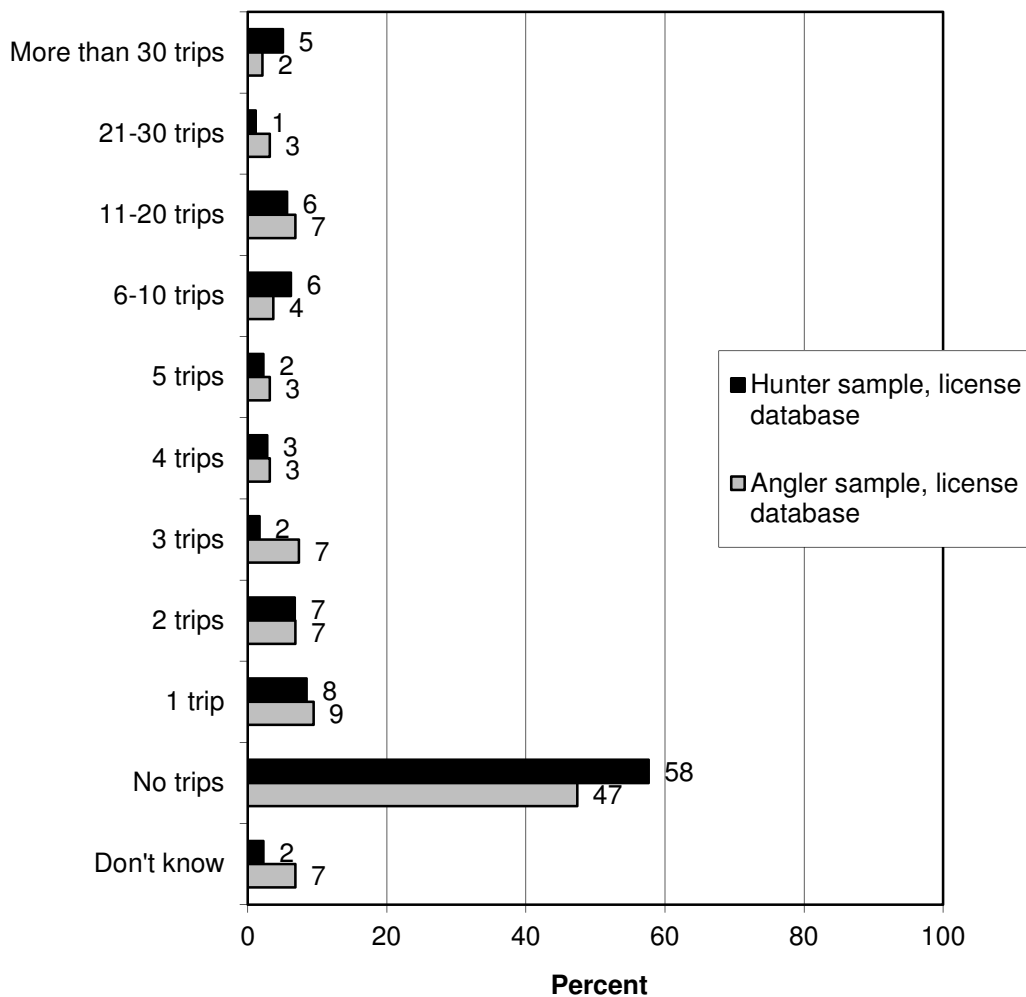
Question 212 suggests that about 64% of nonresident hunters and 51% of nonresident anglers take some overnight trips to hunt and fish. Note, though, that a single trip per season is most typical of those who took overnight trips. Nonetheless, some are quite avid, taking more than three trips, with hunters tending to take more trips to hunt than anglers do to fish.

Q212. Specifically, how many trips to Maryland to go [hunting / fishing] during the 2013-2014 season were overnight trips?



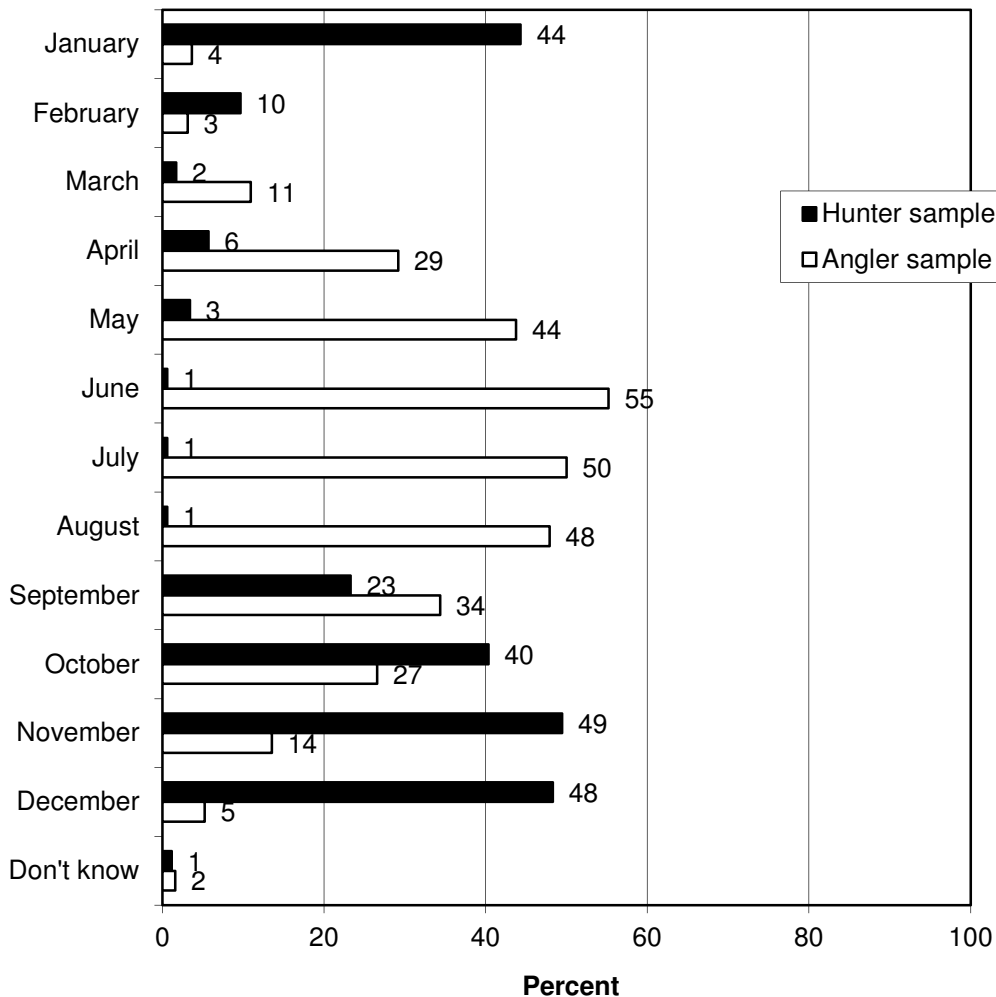
Most commonly, hunters and anglers who went to Maryland for a trip for which hunting or fishing was not the *main* reason for going did not end up hunting or fishing at all. However, 40% of hunters who traveled to Maryland to hunt in the past 3 years and 46% of anglers who traveled to Maryland to fish in the past 3 years had taken a trip to Maryland in which they hunted or fished, even though the main purpose of the trip was not hunting or fishing.

Q220. How many trips, including day trips and overnight trips, have you taken to Maryland in the past 3 years for which [hunting / fishing] was not your main reason for going but you still went [hunting / fishing]? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



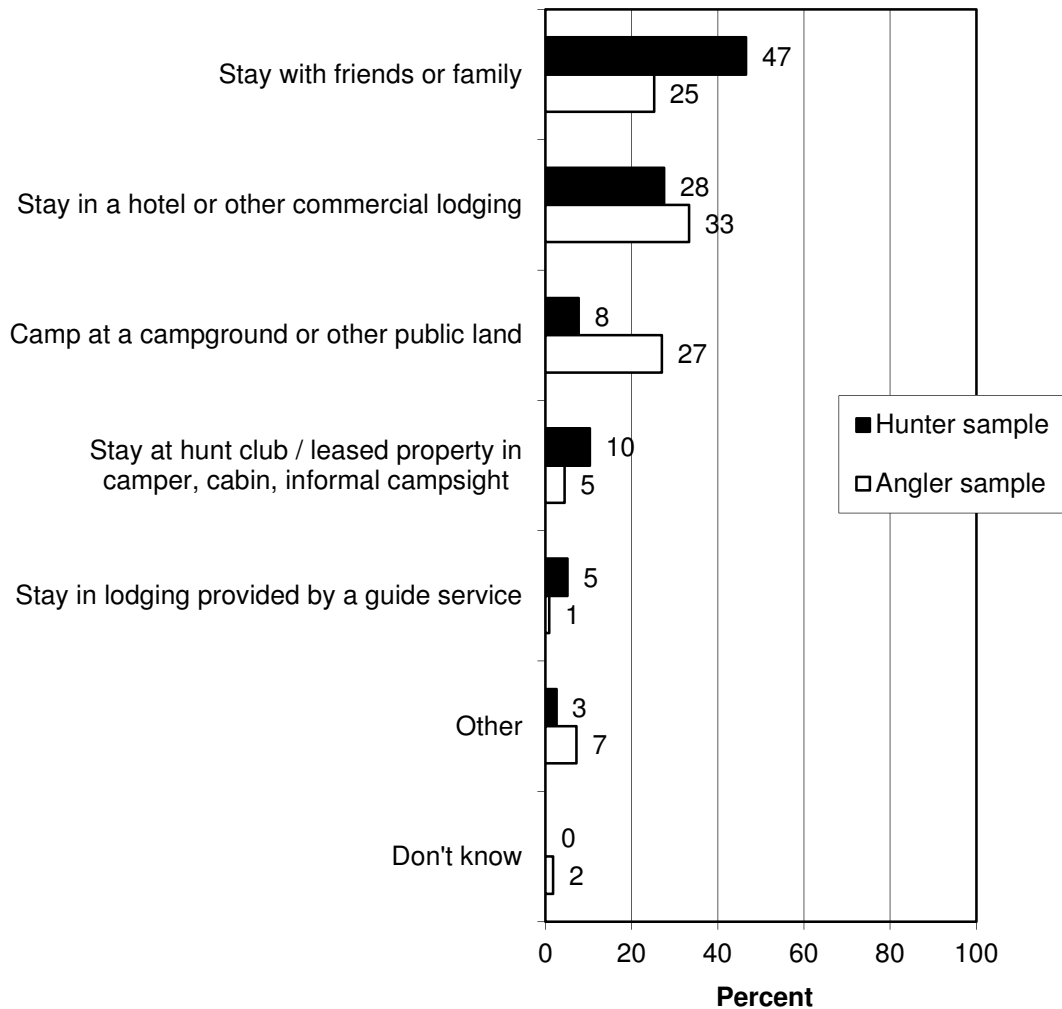
Another question examined the months of hunting and fishing in Maryland among hunters and anglers who came to the state for those activities. November, December, and January are the peak months for hunting, with September also important. Among anglers, May through August is the peak, but April, September, and October are important fishing months as well.

Q204. Specifically, what months of the year do you typically visit Maryland to go [hunting / fishing]? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years.)



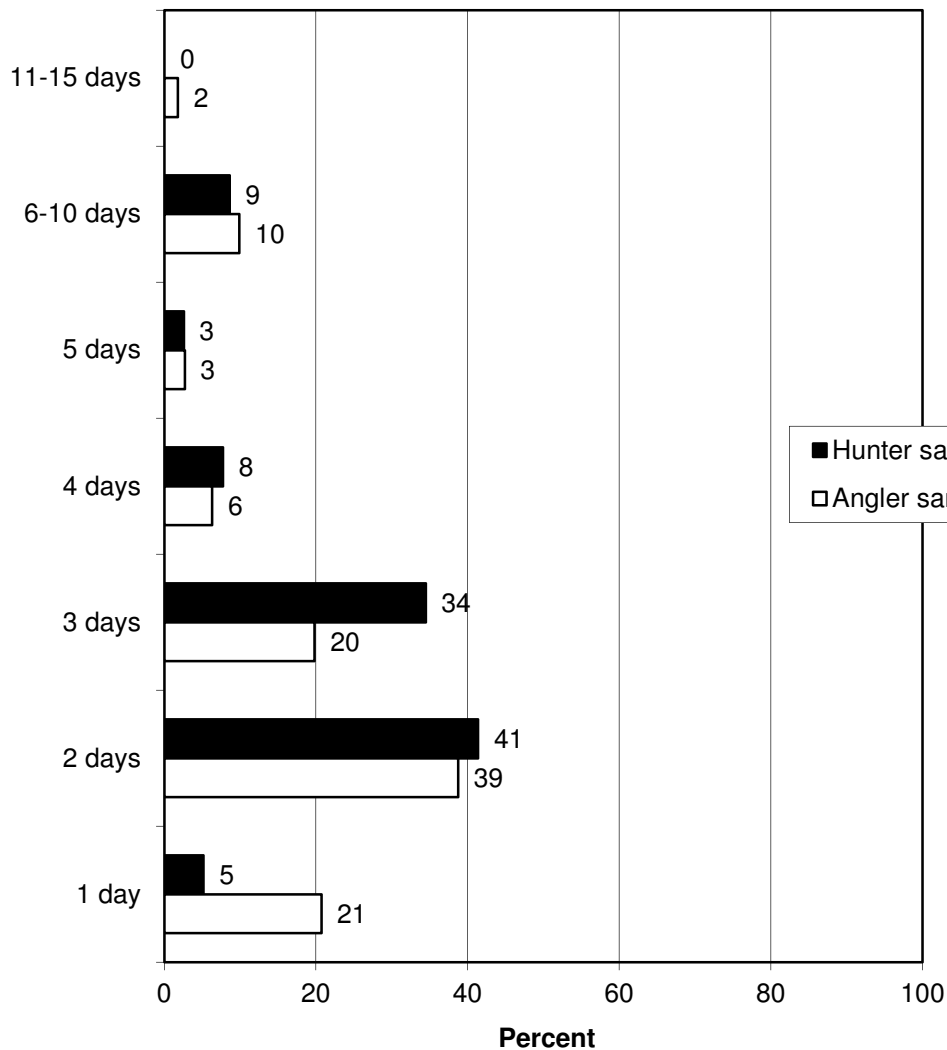
Hunters and anglers who stay overnight in Maryland on hunting/fishing trips have some notable differences. While almost half of hunters on overnight trips to Maryland stay with friends (47% do so), only 25% of such anglers do so. Overnight visitors who are *anglers* are much more likely to stay at a campground/other public land than are overnight visitors who are *hunters* (27% of the anglers in this question versus only 8% of hunters).

Q218. When you stay overnight for a [hunting / fishing] trip in Maryland, which of the following do you typically do? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years, and whose trips included at least one overnight trip.)



The differences continue between hunters and anglers. Question 215 asked about the typical number of days that hunters and anglers stayed overnight, on those times when they took overnight trips. Anglers are more likely than are hunters to stay only 1 day (although for both groups, a 2-day stay is the most common).

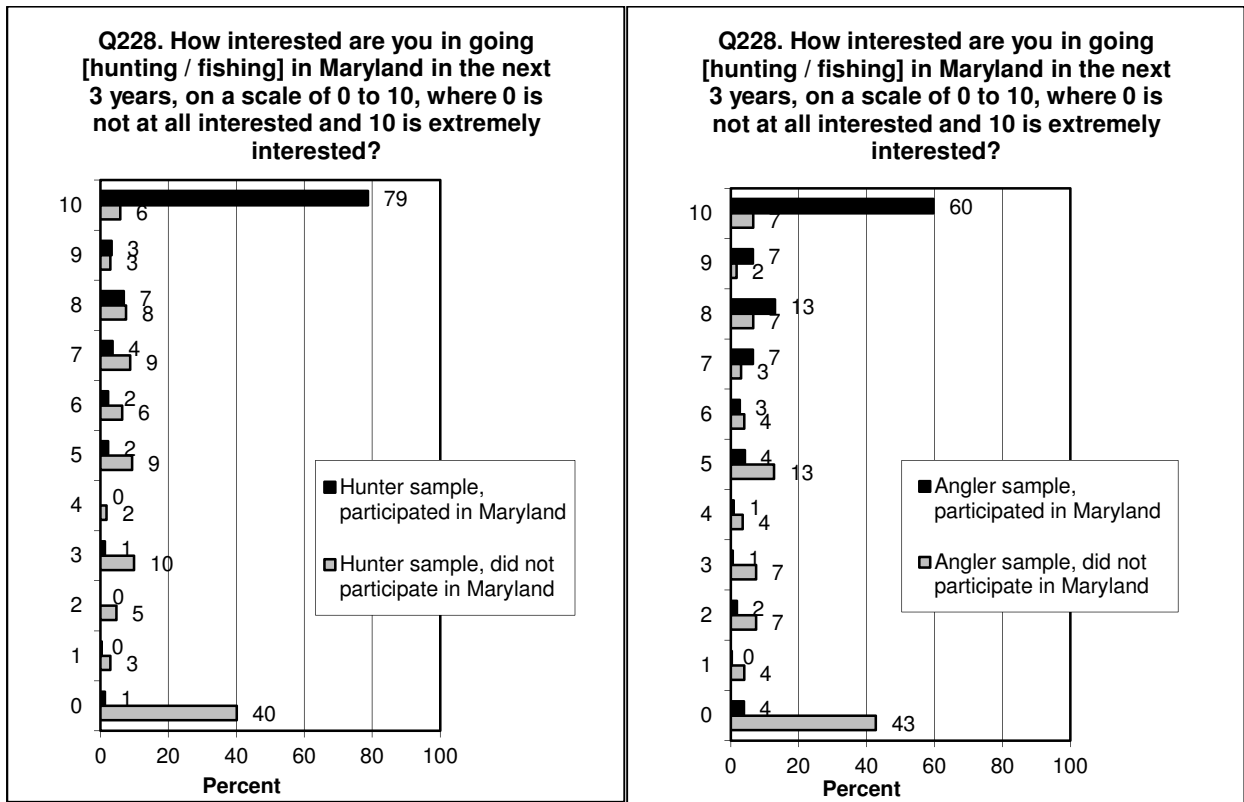
Q215. When you stay overnight for a [hunting / fishing] trip in Maryland, how long, in days, do you typically stay each trip? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years and who stayed overnight.)



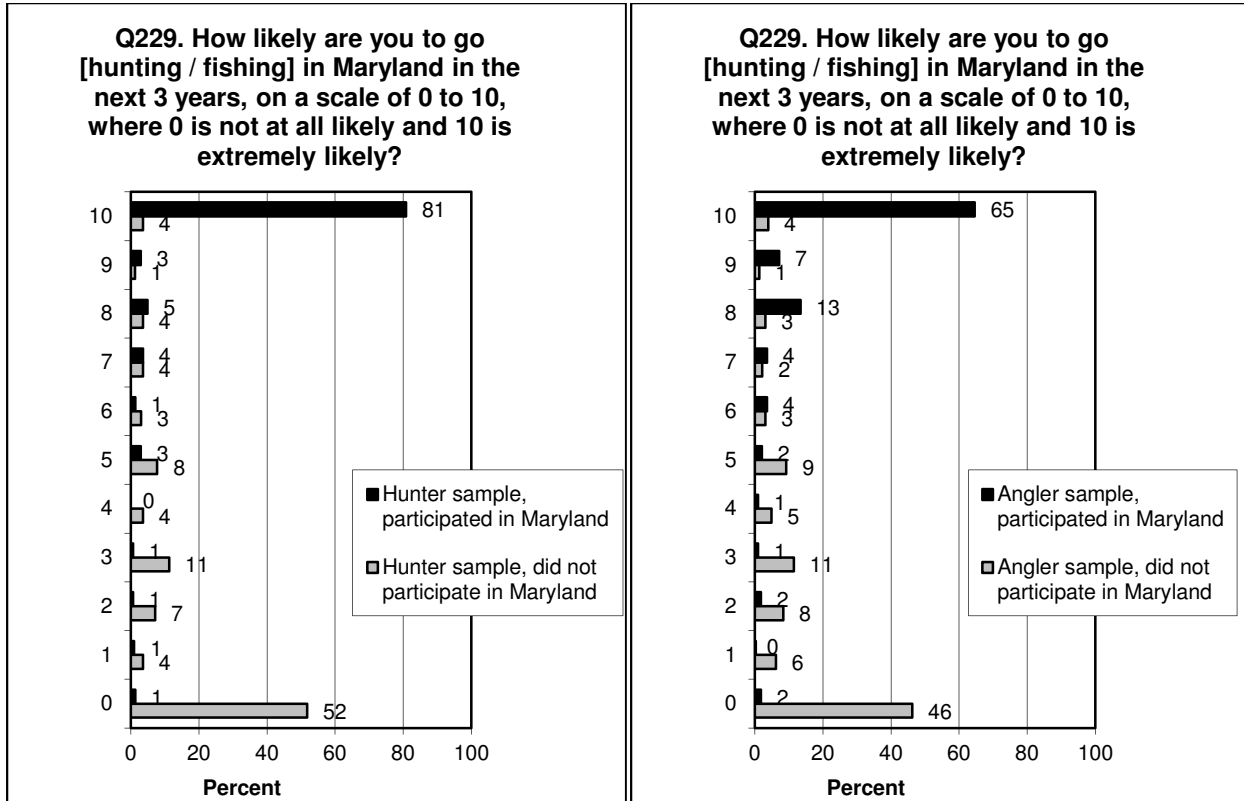
INTEREST IN AND LIKELIHOOD TO GO HUNTING AND FISHING IN MARYLAND

A question asked hunters about their interest in hunting in Maryland and anglers about their interest in fishing in Maryland in the next 3 years. Hunters who have already hunted in Maryland express high interest: 79% rate their interest as high as possible. However, those who have not already hunted in Maryland are a tougher sell: only 6% give that highest interest rating, and 40% rate their interest as “0.”

Among anglers, the results are similar, with anglers who have already visited Maryland to fish being much more interested in fishing in Maryland: 60% of those who already visited Maryland give the highest interest rating, compared to only 7% of those who have not already visited Maryland to fish.

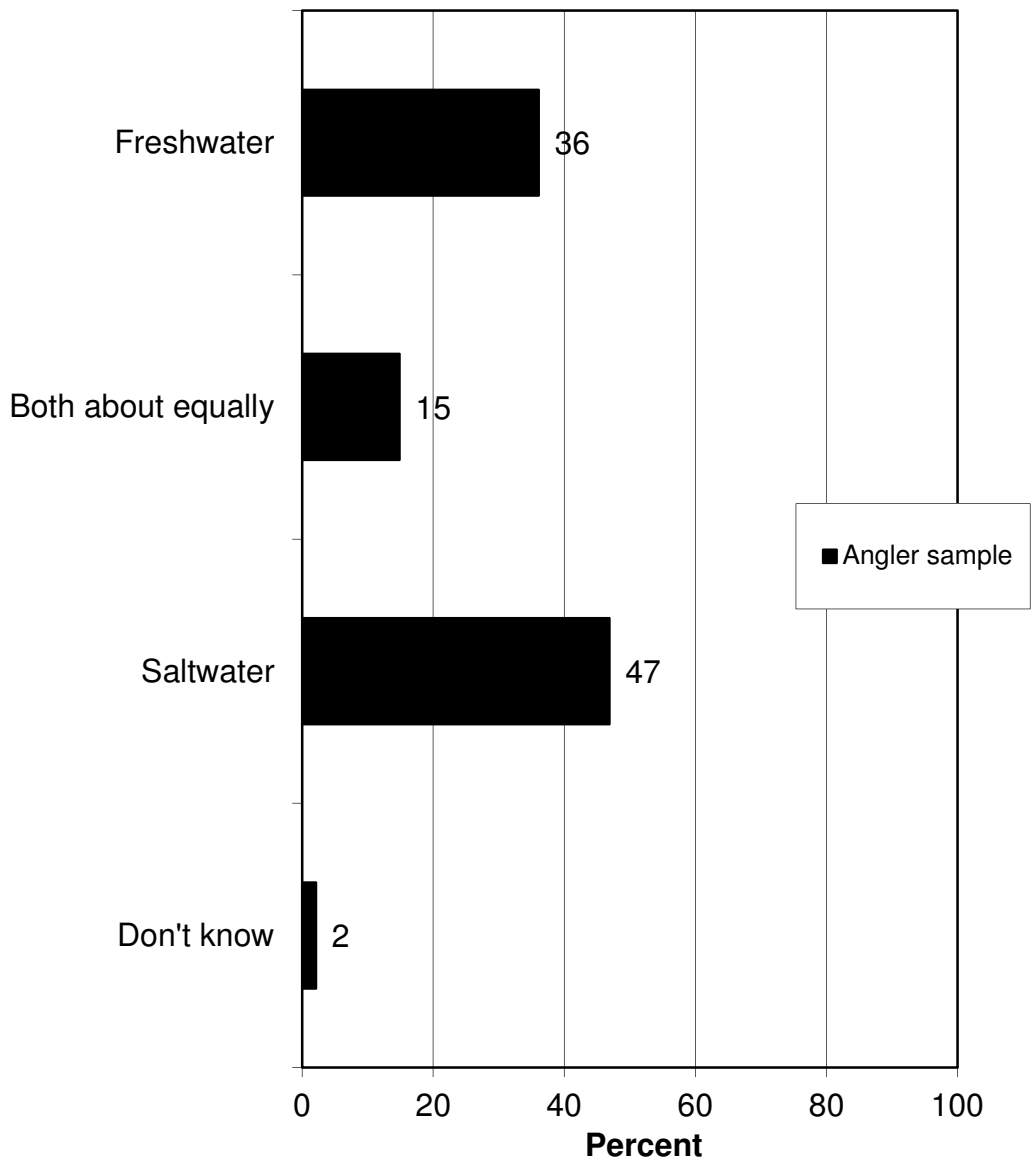


A follow-up question to the one discussed on the previous page asked hunters and anglers to indicate their likelihood to go hunting and fishing in Maryland in the next 3 years. The results mirror the results shown on the previous page, with those who have already visited Maryland being much more likely to do so again to hunt and fish; this is particularly so for hunters.



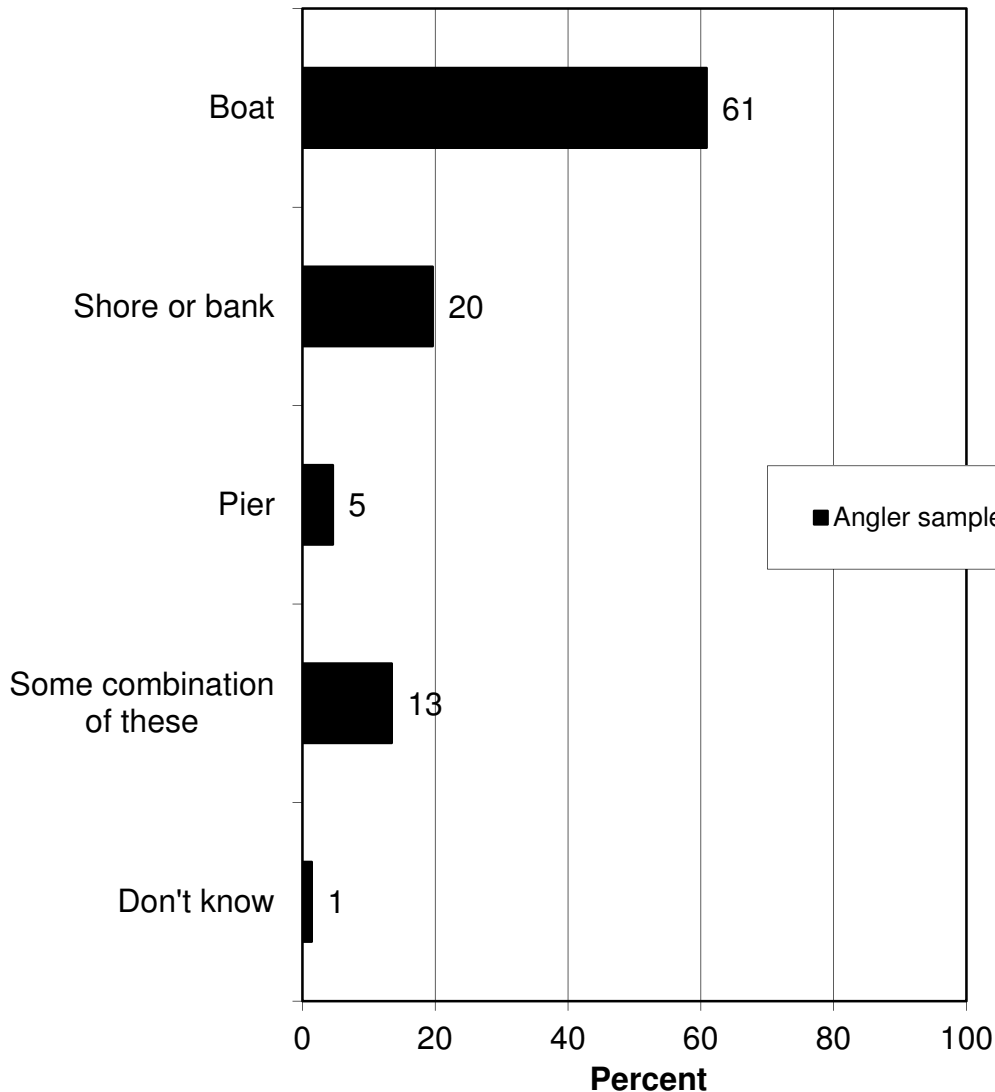
Question 242 found that the most interest is expressed for saltwater fishing in Maryland over freshwater fishing: 47% are interested in saltwater exclusively, compared to 36% being interested in freshwater exclusively (15% are interested in both).

Q242. If you were to go fishing in Maryland, would you be most interested in freshwater or saltwater fishing? (Asked of the angler sample.)



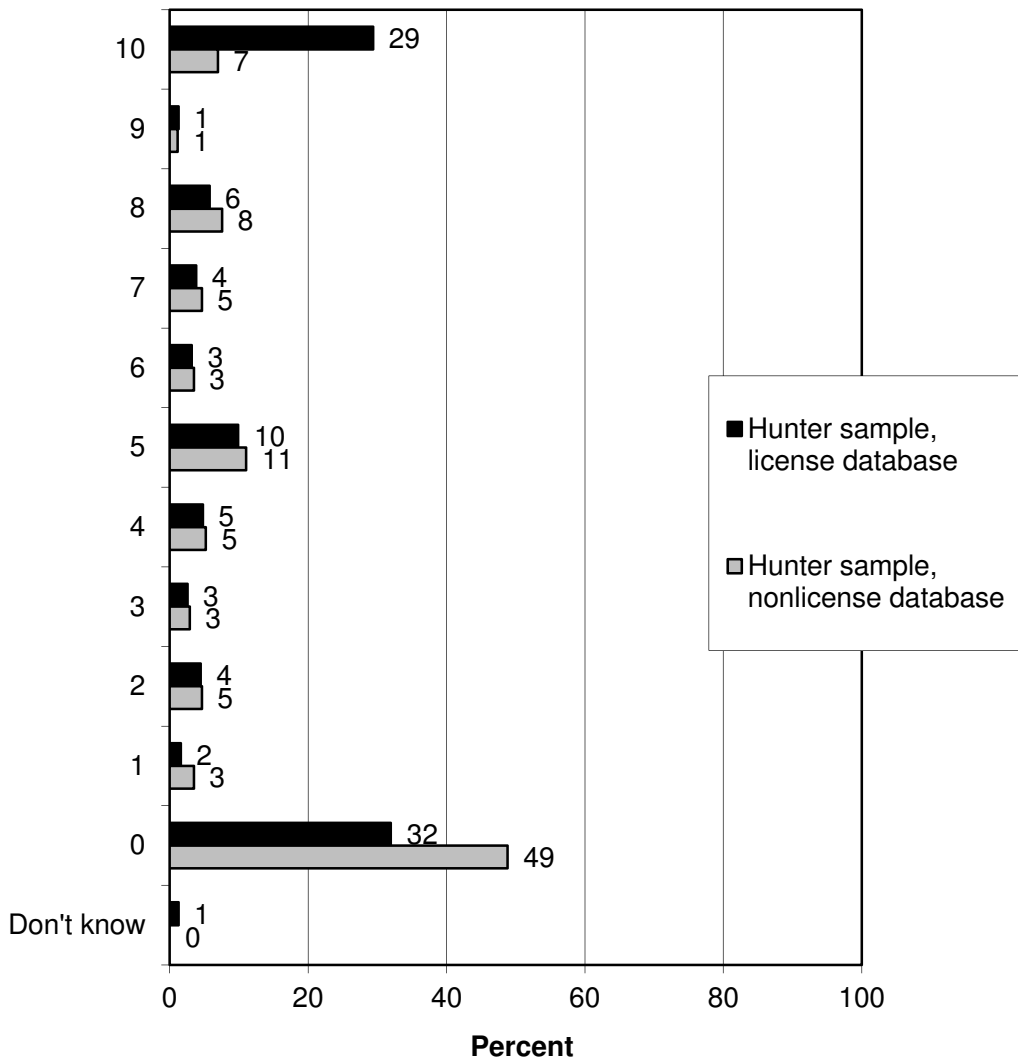
Another question asked about the location in which people would be most interested in fishing in Maryland vis-à-vis a boat, from shore, or from a pier. The large majority of anglers in the survey say that they would be most interested in fishing from a boat (61% of anglers give this response), while much smaller percentages would be most interested in shore/bank fishing (20%) or fishing from a pier (5%).

Q243. If you were to go fishing in Maryland, would you be most interested in fishing from a boat, from a shore or bank, or from a pier? (Asked of the angler sample.)

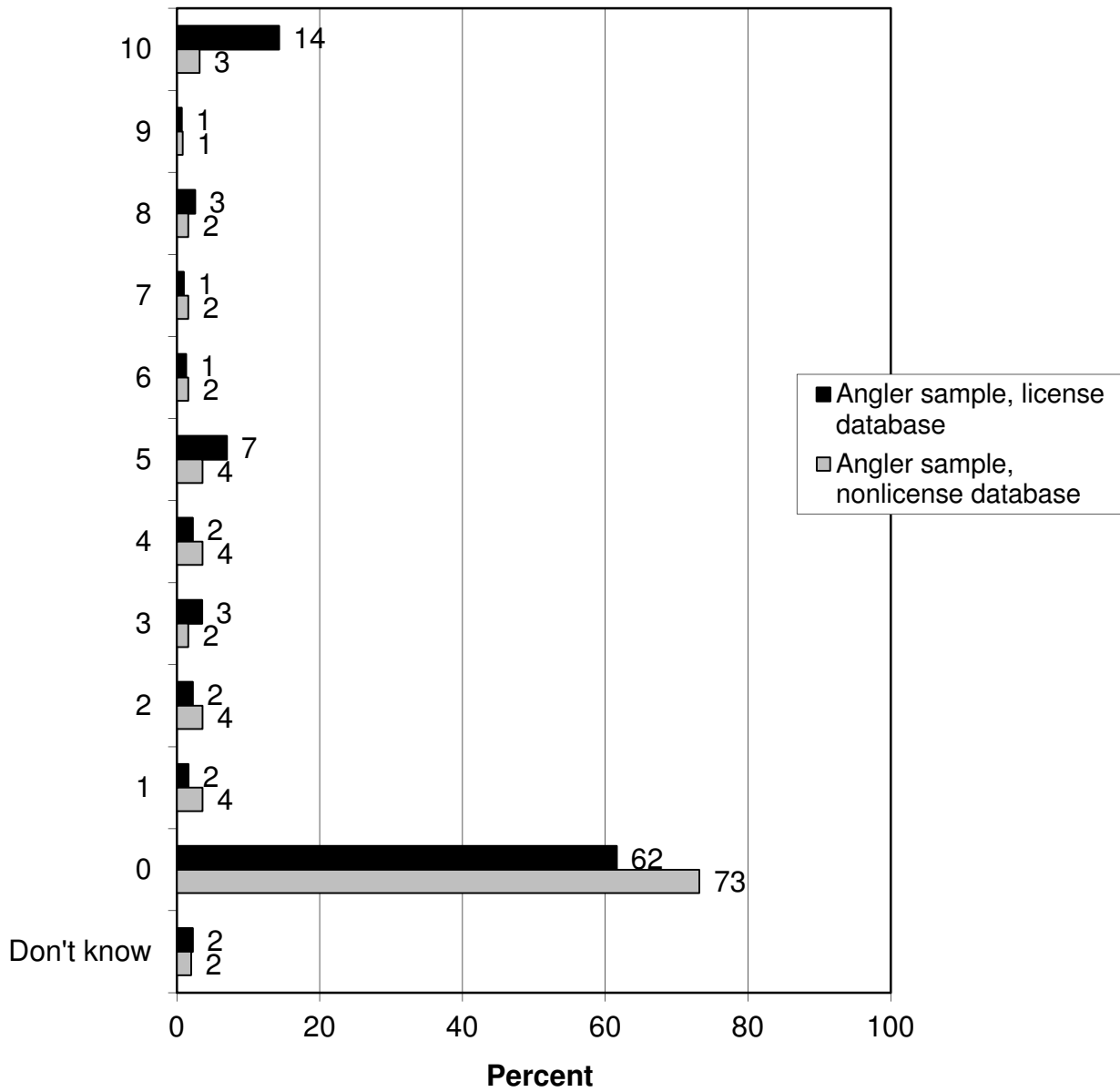


Finally in this section, the survey asked hunters about their interest in fishing in Maryland, and it asked anglers about their interest in hunting. Hunters show more interest in fishing than anglers do for hunting in Maryland. Both questions show some amount of polarization, with the most common ratings being “0” or “10.”

Q270. How interested are you in going fishing in Maryland in the next 3 years, on a scale of 0 to 10 where 0 is not at all interested and 10 is extremely interested?



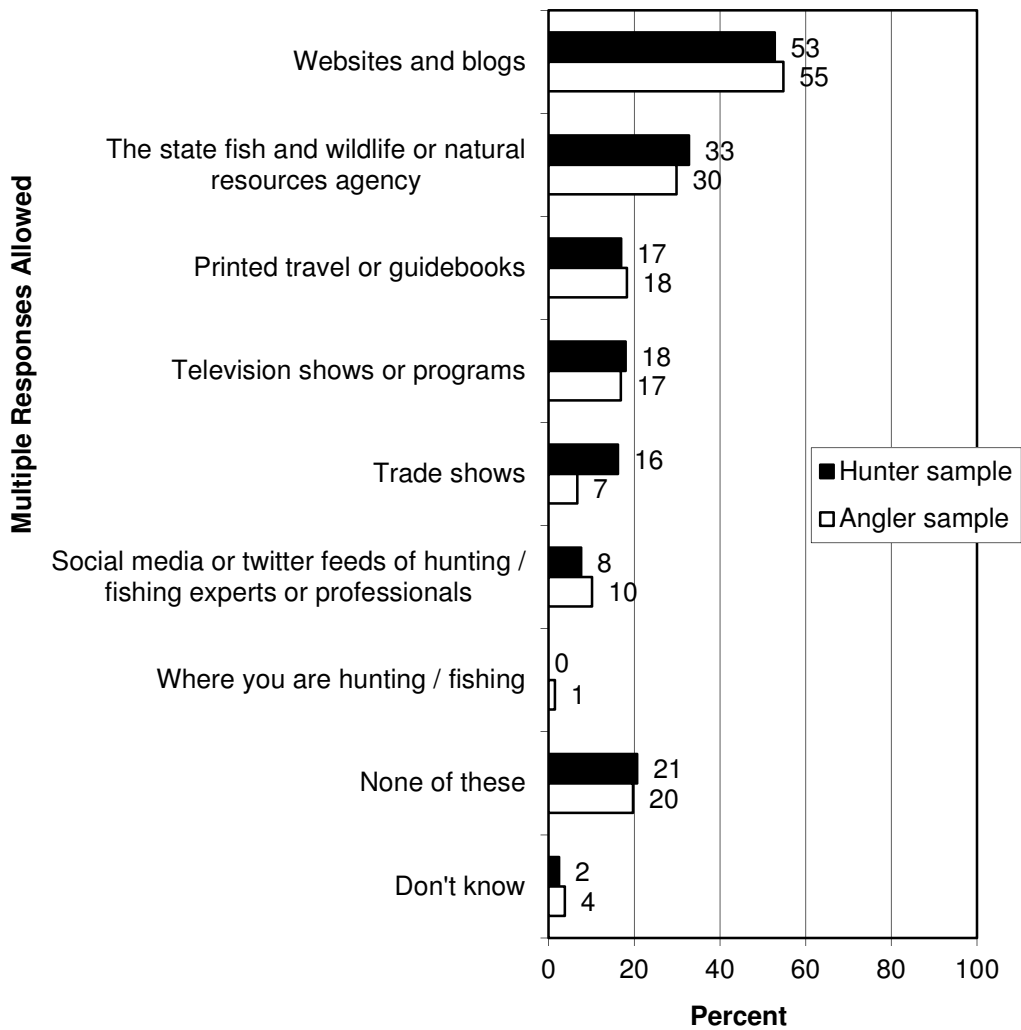
Q270. How interested are you in going hunting in Maryland in the next 3 years, on a scale of 0 to 10 where 0 is not at all interested and 10 is extremely interested?



PLANNING FOR HUNTING AND FISHING TRIPS OUT OF STATE

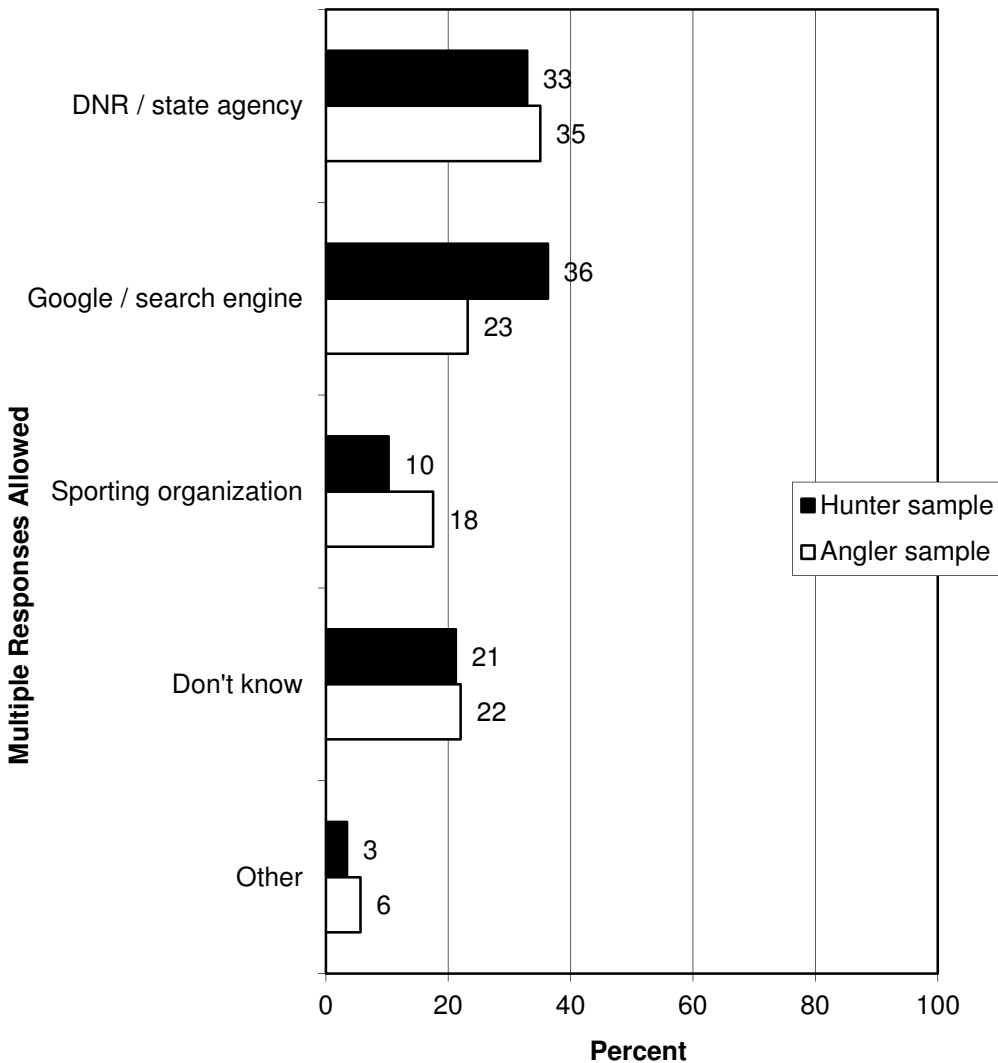
The survey asked about sources of information about hunting and fishing; for both hunters and anglers, websites and blogs top the list of informational sources, with majorities of both groups using them. Their state’s (or another state’s) fish and wildlife agency is also an important source (often accessed via the web, as well). Nonetheless, printed travel books or guidebooks play a role for 17% of hunters and 18% of anglers. Television shows also are used by 18% of hunters and 17% of anglers.

Q300. Which of the following do you typically use when looking for information on [hunting / fishing]?

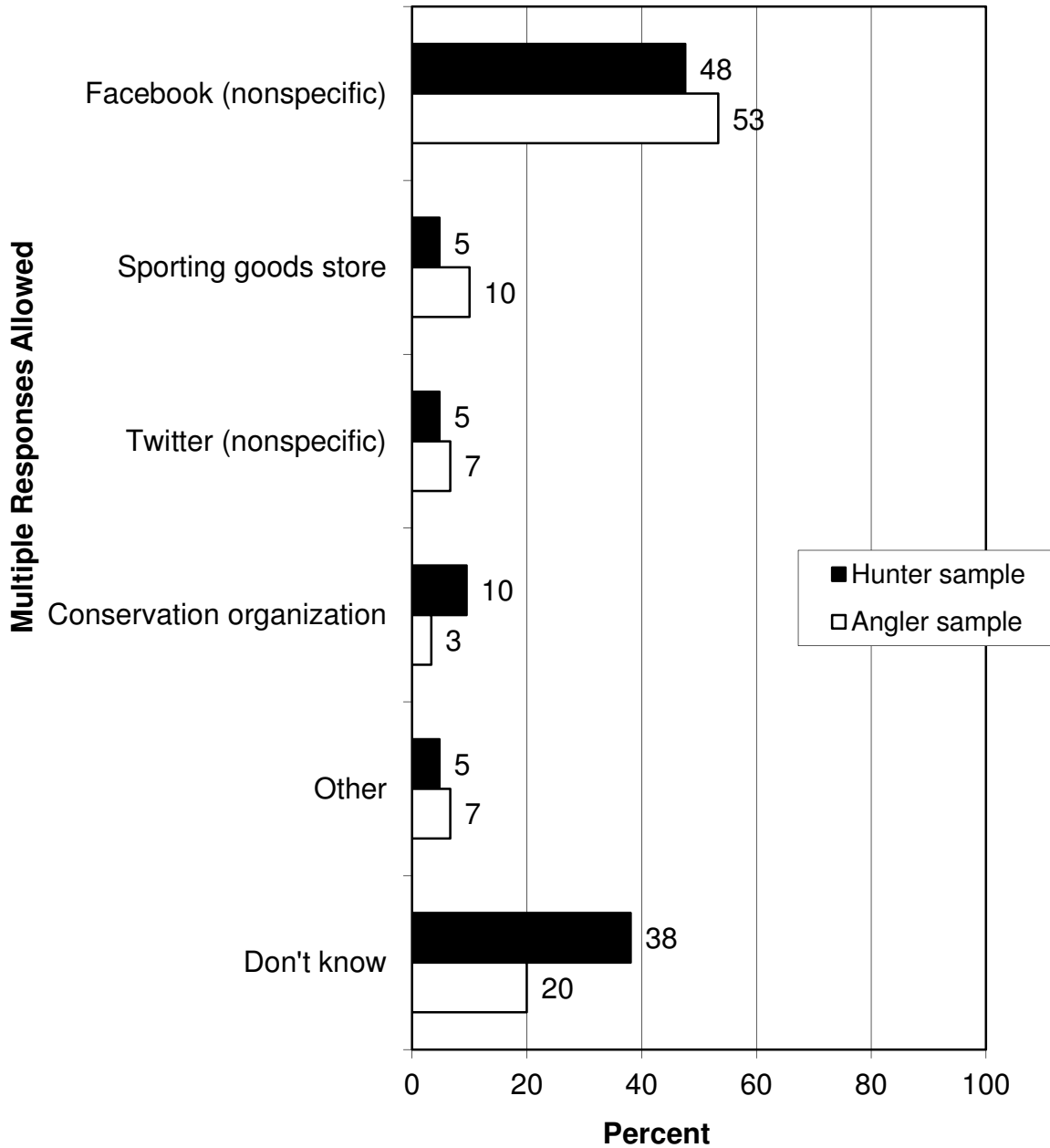


A follow-up question asked about the particular websites and blogs that hunters and anglers used for information about hunting and fishing: state agency websites and general search engines (e.g., Google) are the most-used websites. Individual sporting organizations' websites/blogs are also important. As shown on the following page, those who use social media most commonly use Facebook.

Q302. Specifically, which websites and blogs do you typically use? (Among those who use websites or blogs.)

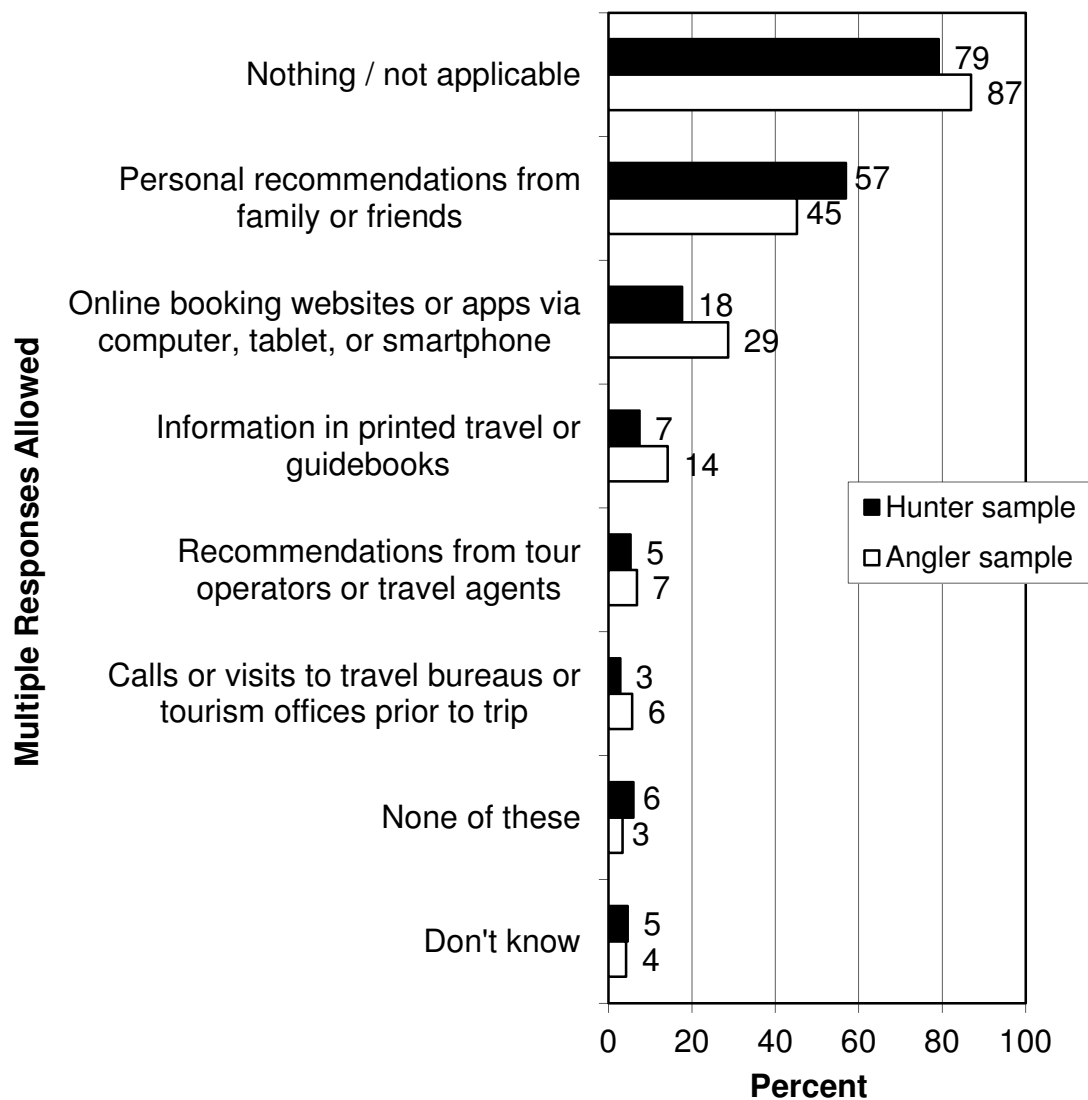


Q303. Specifically, whose social media pages or twitter feeds do you typically use? (Among those who use social media.)



The final graph in this section shows that hunters and anglers most commonly use personal recommendations from friends and family when planning travel for hunting and fishing trips. Nonetheless, there was substantial use of online booking websites and/or computer or phone apps (these electronic sources being used by about twice as many who use printed travel books or guidebooks).

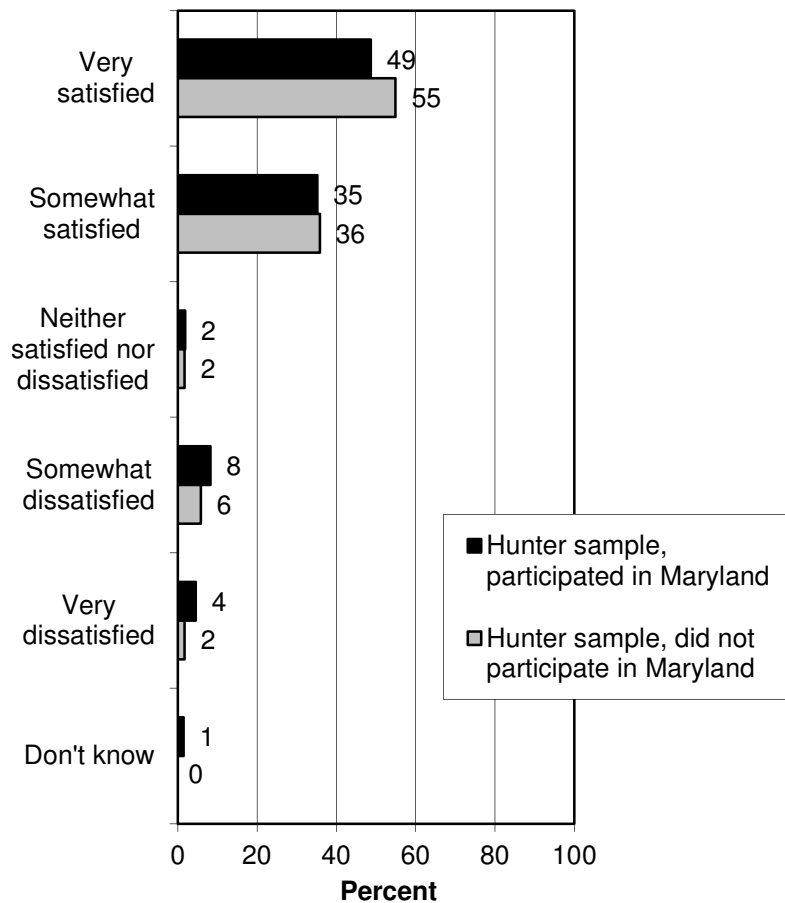
Q306. Which of the following have you used when planning or booking travel arrangements for your [hunting / fishing] trips?



PERCEPTIONS OF QUALITY OF HUNTING AND FISHING IN VARIOUS STATES, INCLUDING RESPONDENTS' HOME STATES

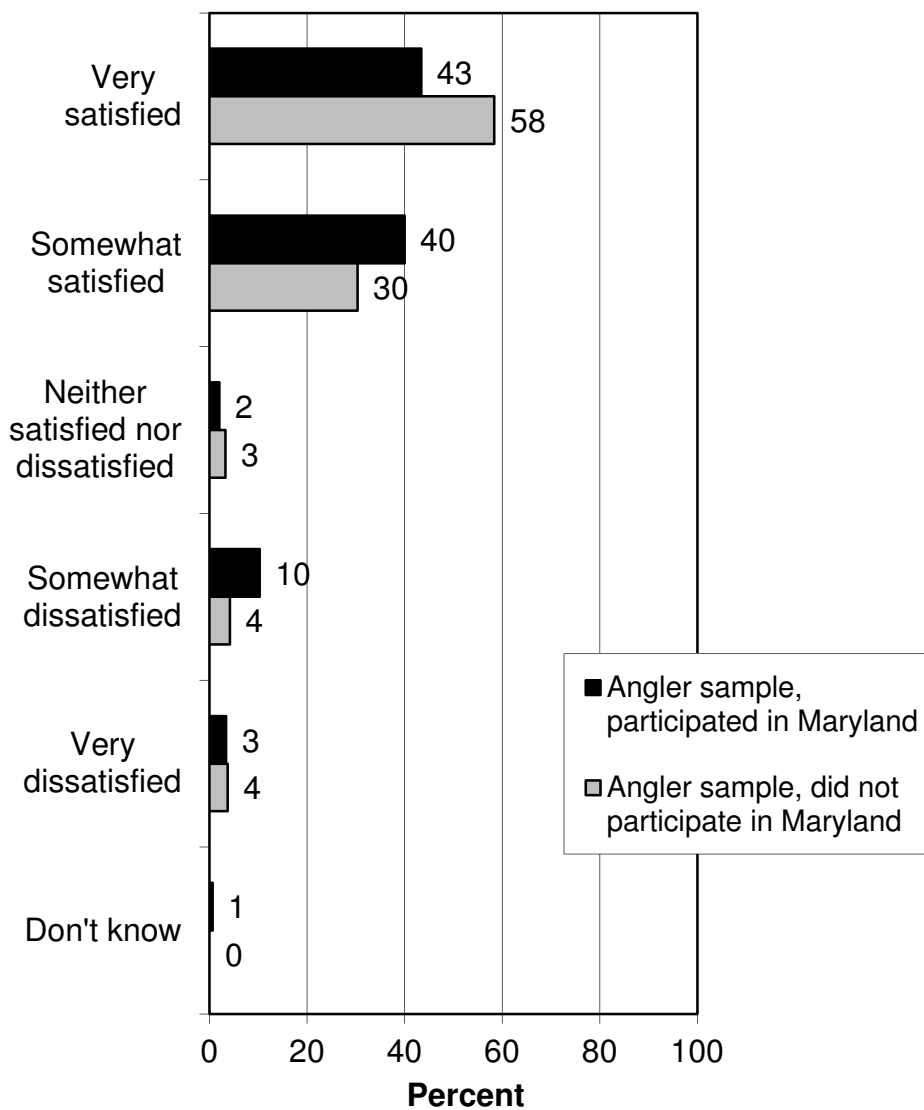
One way to examine perceptions of quality is to ask hunters and anglers to rate their level of satisfaction or dissatisfaction with hunting and fishing in their home states. Among hunters who hunted in their home state, a majority of both those who also participated in Maryland and those who did not are satisfied with hunting in their home state. In other words, some of those who hunted in Maryland also had satisfactory hunting experiences in their home state—perhaps they have another reason for hunting in Maryland other than dissatisfaction with hunting in their home state. Nonetheless, the comparison below shows a higher percentage being dissatisfied with their home state’s hunting among the group who had also hunted in Maryland; obviously, dissatisfaction in the home state creates a ripe target market for Maryland hunting promotions, albeit a small market.

Q77. Overall, how satisfied or dissatisfied are you with your [hunting / fishing] experiences in [STATE OF RESIDENCE]? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



The graph showing anglers on this question mirrors the one for hunting shown on the previous page, with a little more home-state dissatisfaction among those who also fished in Maryland. Nonetheless, a majority of both groups are satisfied with their home-state fishing.

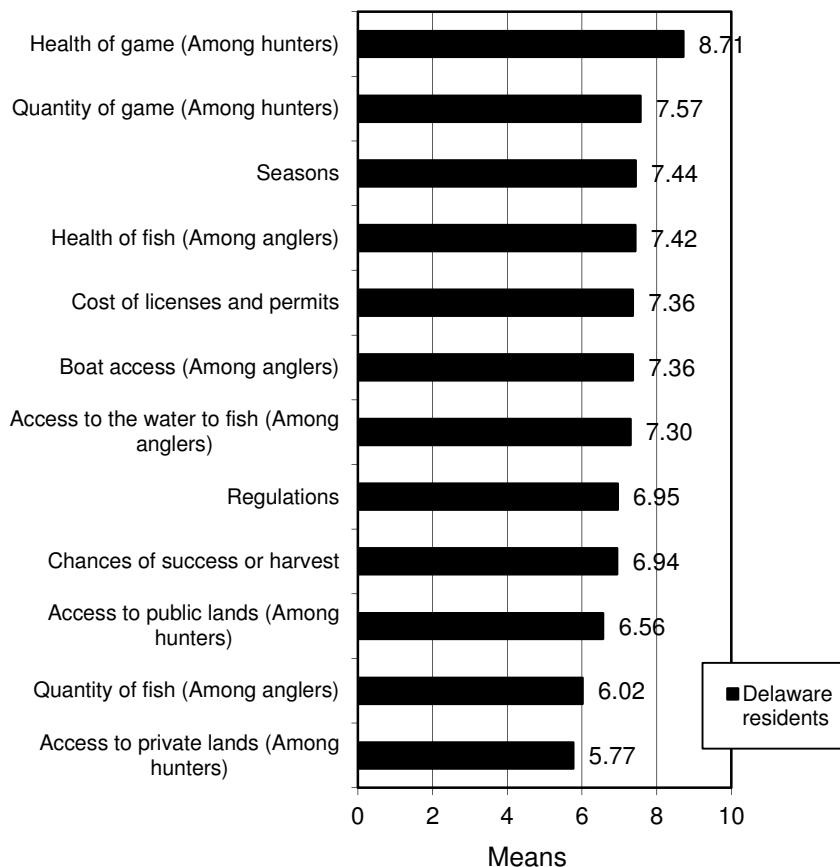
Q77. Overall, how satisfied or dissatisfied are you with your [hunting / fishing] experiences in [STATE OF RESIDENCE]? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



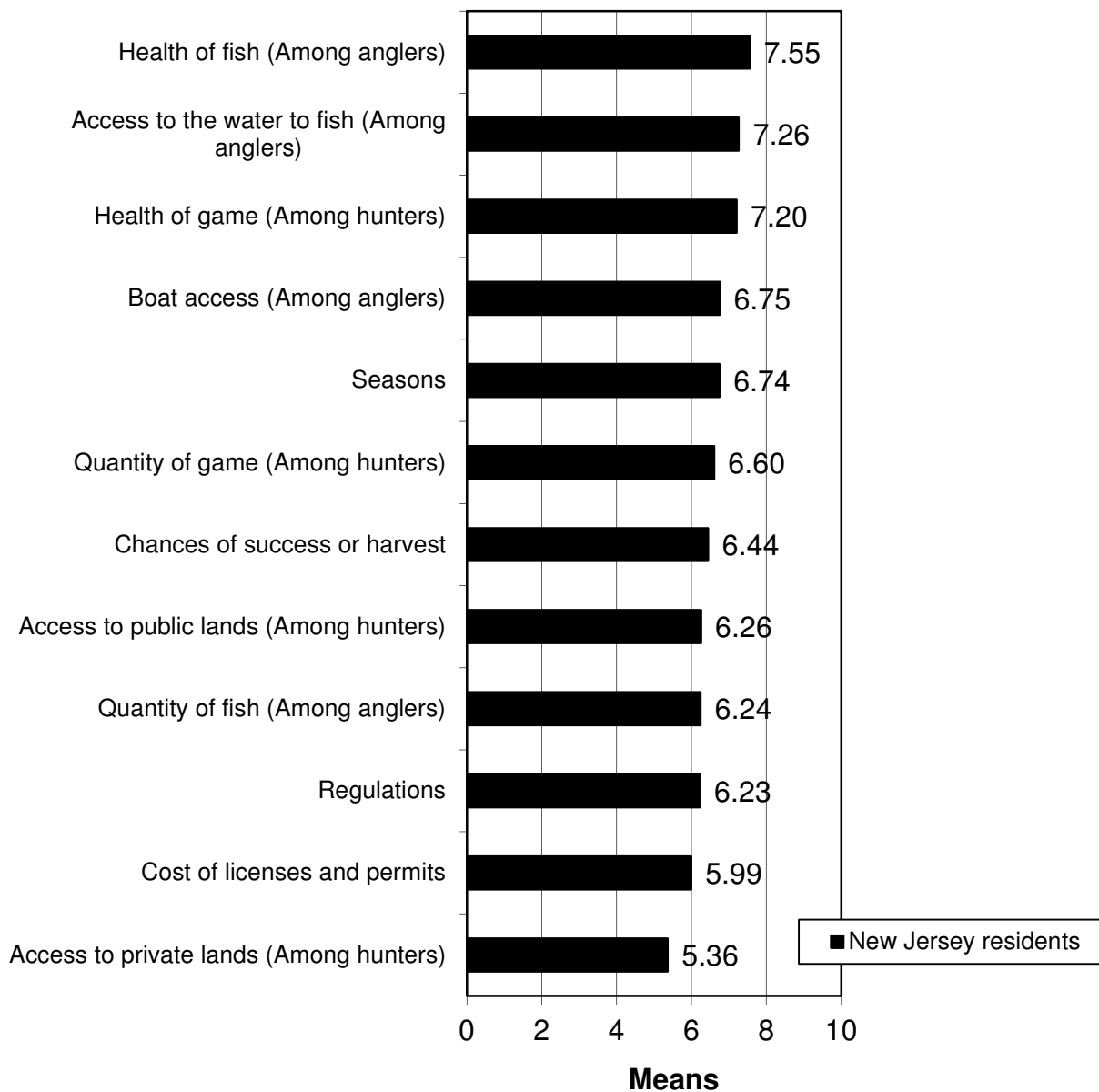
Twelve items were rated by hunters and anglers in their state of residence (four items particular to hunting, four items particular to fishing, and four items that both hunters and anglers rated). The survey used a 0 to 10 scale, with 0 being poor and 10 being excellent. The results are shown for each state, which are slightly different from state to state. Some commonalities, however, are in the data. In particular, access to private lands for hunting was the lowest in the ranking for all six states, and access to public lands for hunting is in the bottom half of the ranking for all states except Pennsylvania. Quantity of fish is ranked low in all states except New York and West Virginia.

On the other hand, the health of game is highly ranked in all states, and the health of fish is also highly ranked in all states except Pennsylvania. Finally, access to waters for fishing is highly ranked in New Jersey, New York, Pennsylvania, and West Virginia (in the other states, it falls in the middle; in no states is it ranked low).

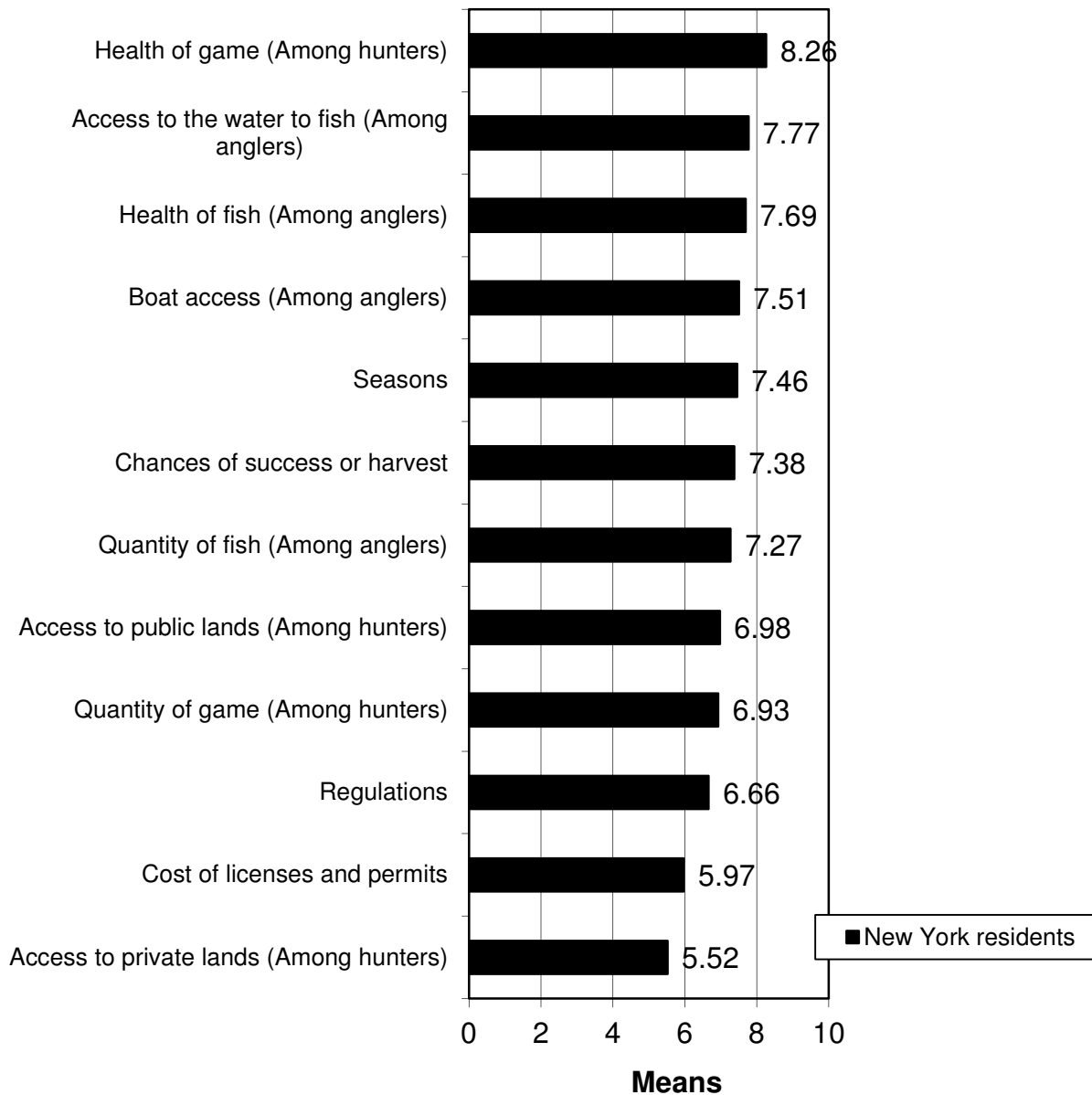
Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



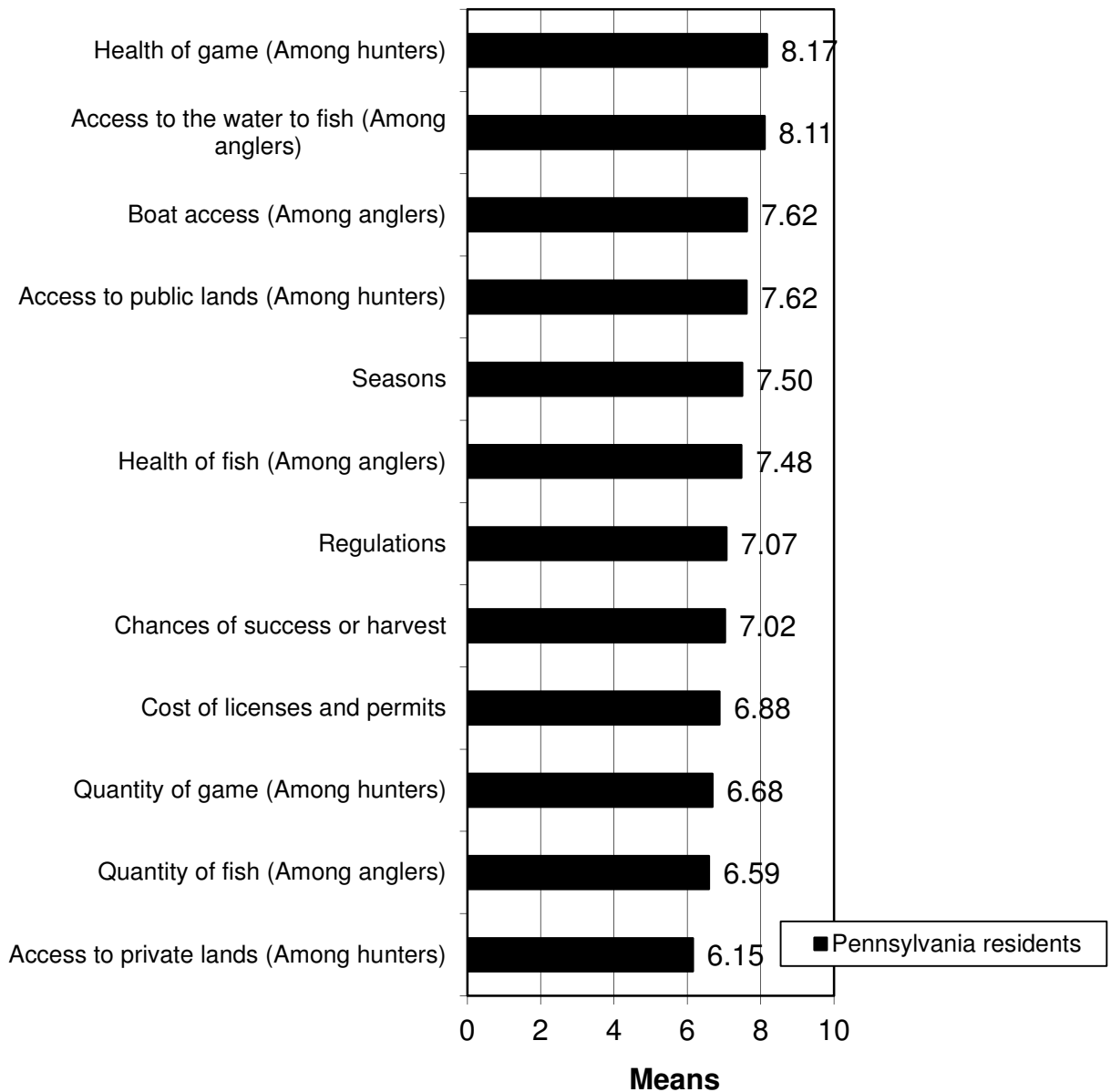
Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



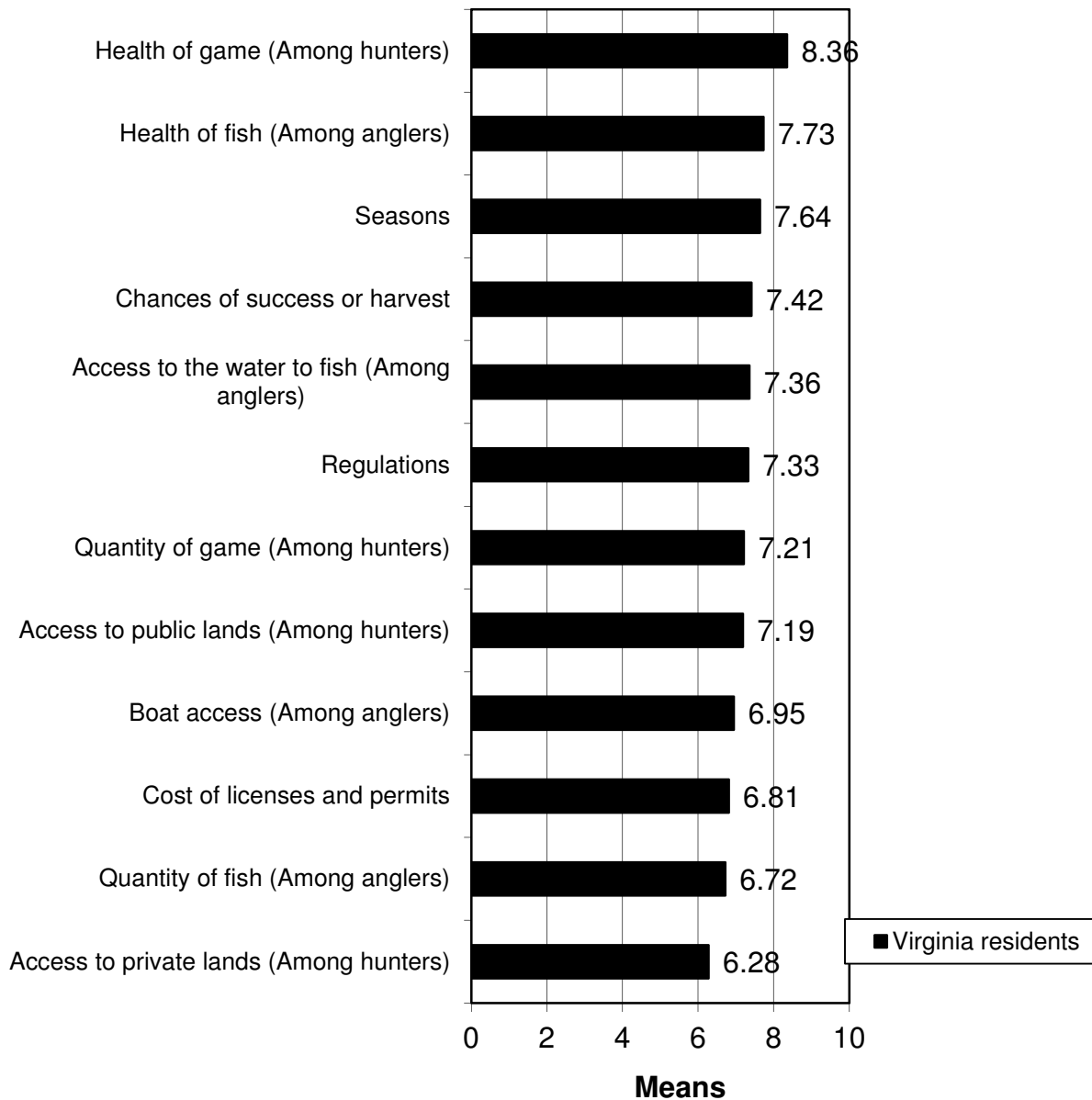
Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



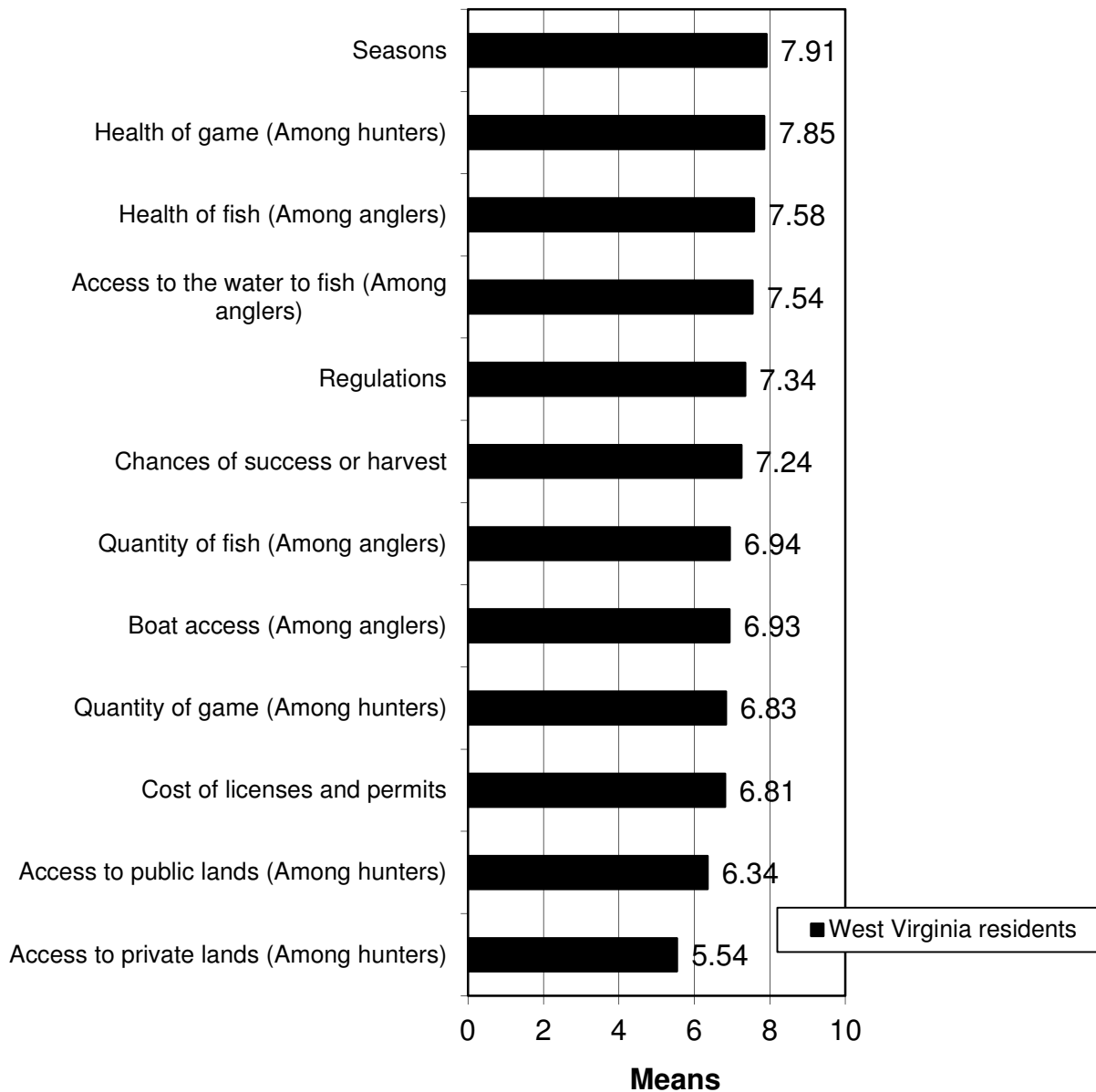
Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



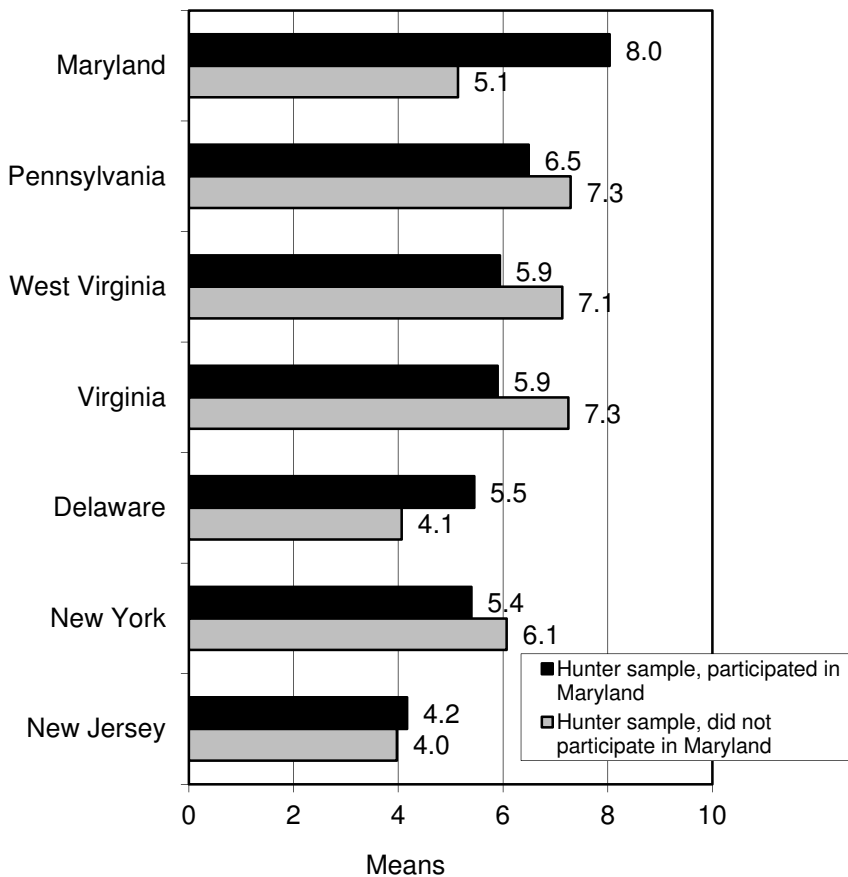
Q80-93. How would you rate this in [STATE OF RESIDENCE], on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



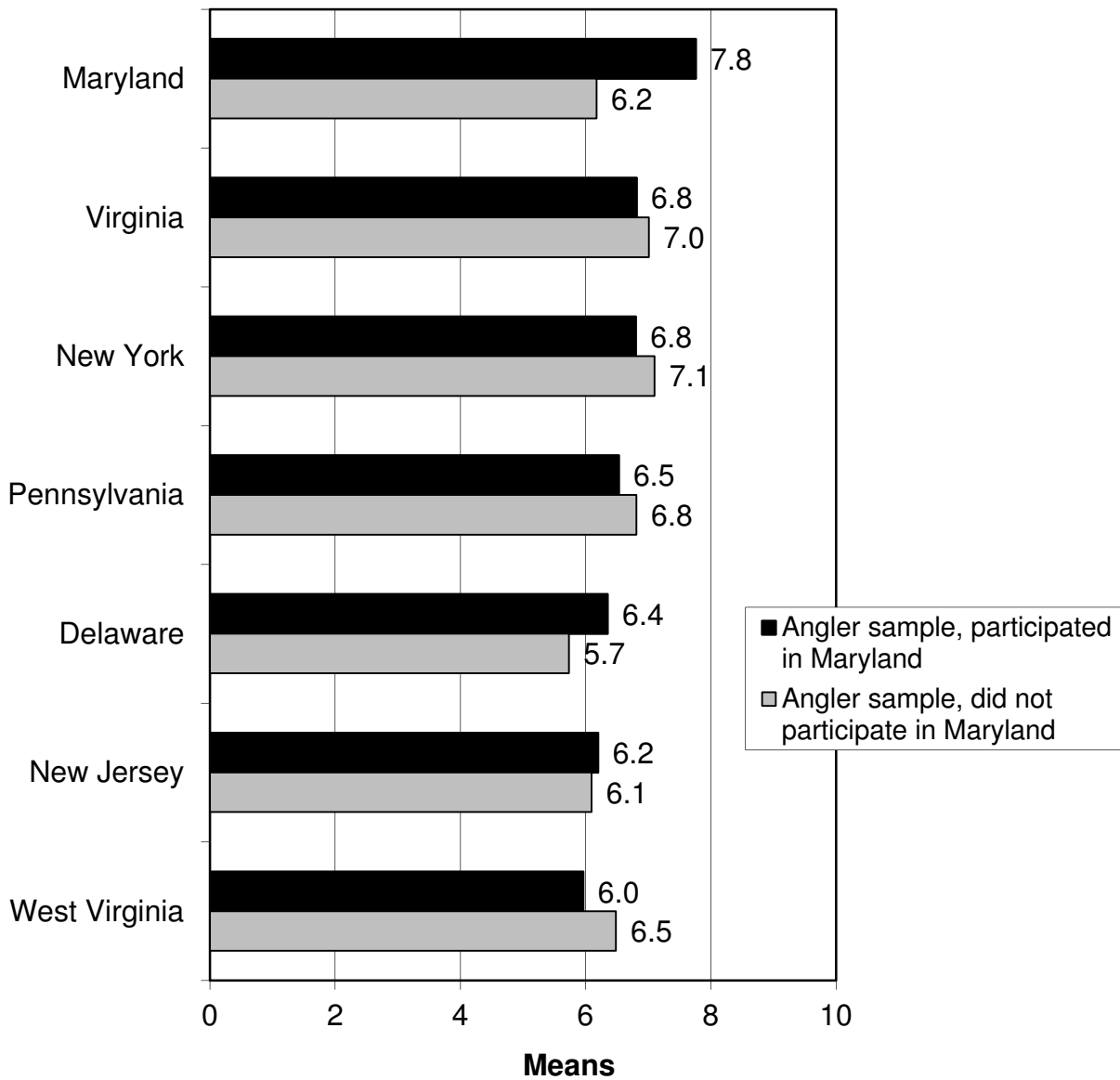
Hunters and anglers rated the quality of hunting and fishing in seven states (the six states of interest and Maryland, as well). The analysis looks at those who participated in Maryland (they would presumably already have a good opinion of Maryland based on the fact that they went there to hunt or fish) and those who did not participate in Maryland. As expected, Maryland is the topped ranked state, ranked by the mean score (on a 0 to 10 scale, with 0 being poor and 10 being excellent), among those who participated in Maryland.

Among those who did not participate in Maryland, however, Maryland is *not* the topped rank hunting or fishing state. Instead, Pennsylvania, Virginia, West Virginia, and New York are all ranked higher than Maryland for the quality of hunting (graph on this page). In looking at ratings of the quality of fishing, New York, Virginia, Pennsylvania, and West Virginia are all ranked higher (graph on the following page).

Q37-43. How would you rate the quality of hunting opportunities in this state, on a scale of 0 to 10, where 0 is poor and 10 is excellent?



Q37-43. How would you rate the quality of fishing opportunities in this state, on a scale of 0 to 10, where 0 is poor and 10 is excellent?

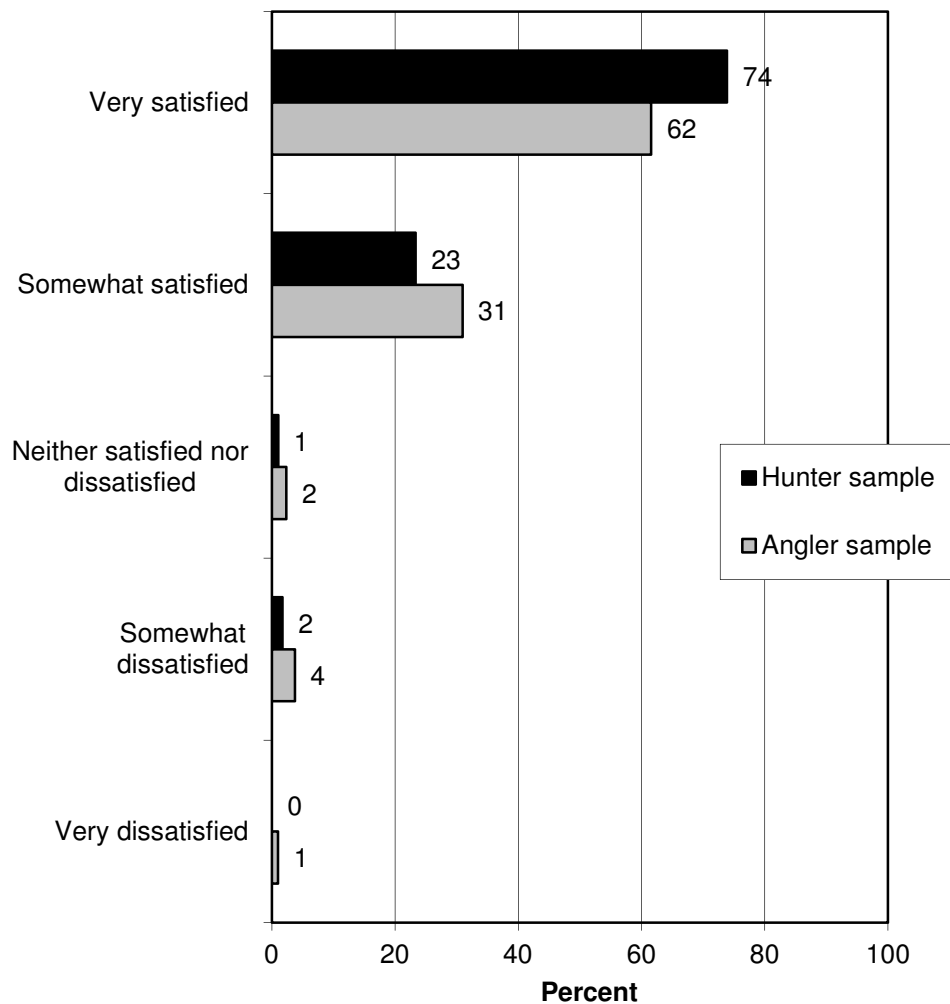


PERCEPTIONS OF QUALITY OF HUNTING AND FISHING IN MARYLAND

Hunters who visit Maryland to hunt are, for the most part, satisfied with their hunting experiences in the state: 97% are satisfied, with 74% being *very* satisfied. Nonetheless, satisfaction has not reached a ceiling, as there are 23% who said that they were only *somewhat* satisfied, and another 3% who did not indicate being satisfied.

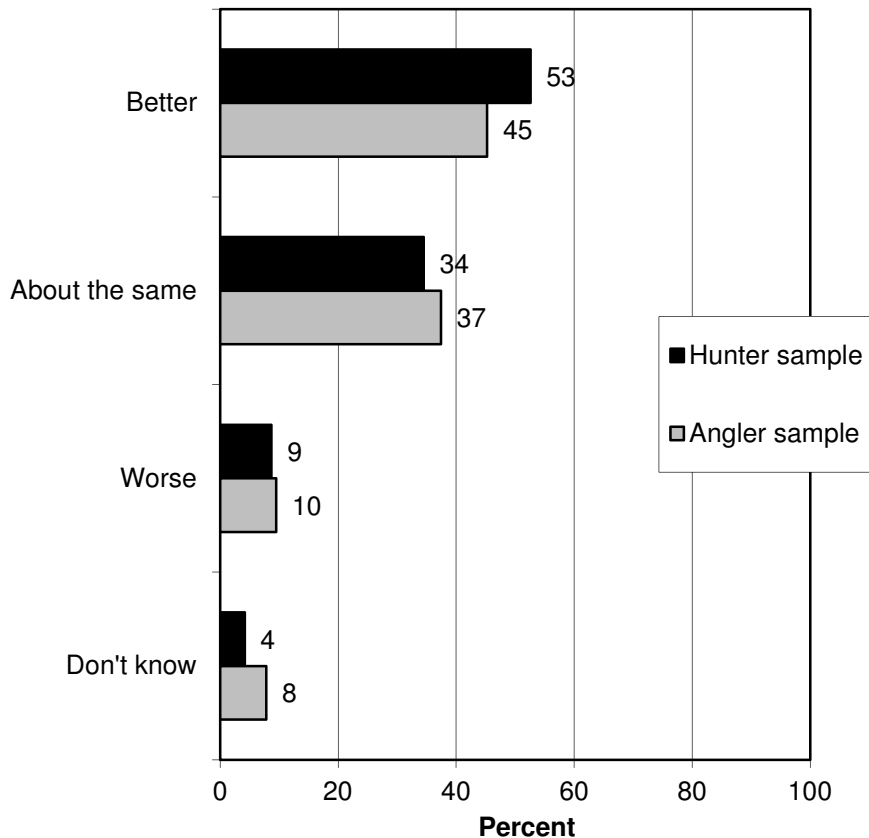
Among visiting anglers, satisfaction is still positive, but not as high as among hunters: 93% are satisfied, but only 62% are *very* satisfied. This means that room for improvement is manifested in the 31% being only *somewhat* satisfied and the 7% who did not indicate being satisfied.

Q171. Overall, how satisfied or dissatisfied are you with your [hunting / fishing] experiences in Maryland? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



Another question asked hunters and anglers to compare their state's hunting and fishing to the opportunities for these activities in Maryland. Note that this question was asked of those who had traveled to Maryland to hunt or fish, which predisposes them to like Maryland (otherwise, why would they have come?); nonetheless, the results are of interest. One could assume that about half of each sample (53% of hunters, 45% of anglers) who think that Maryland is better than their home state would be a fruitful target market. Of the remaining samples, fortunately the "about the same" response predominates (34% and 37% of hunters and anglers, compared to 9% and 10%, respectively, saying Maryland is worse), making secondary groups for marketing.

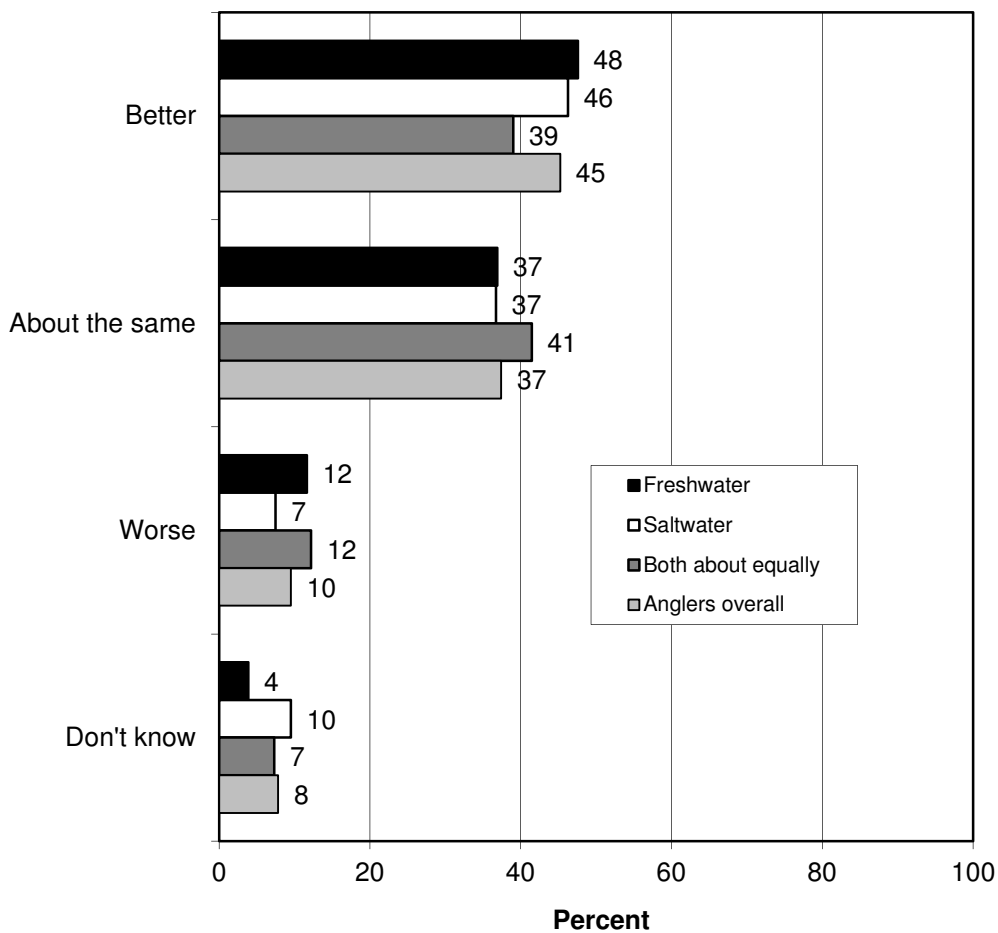
Q172. In your opinion, are [hunting / fishing] opportunities in Maryland better, about the same, or worse than [hunting / fishing] opportunities in [STATE OF RESIDENCE]? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



To get a more nuanced view of anglers, a crosstabulation of this question was run by whether the angler fished in freshwater exclusively, both freshwater and saltwater, or saltwater exclusively. There are anglers in the sample from states that have no saltwater (West Virginia) or little

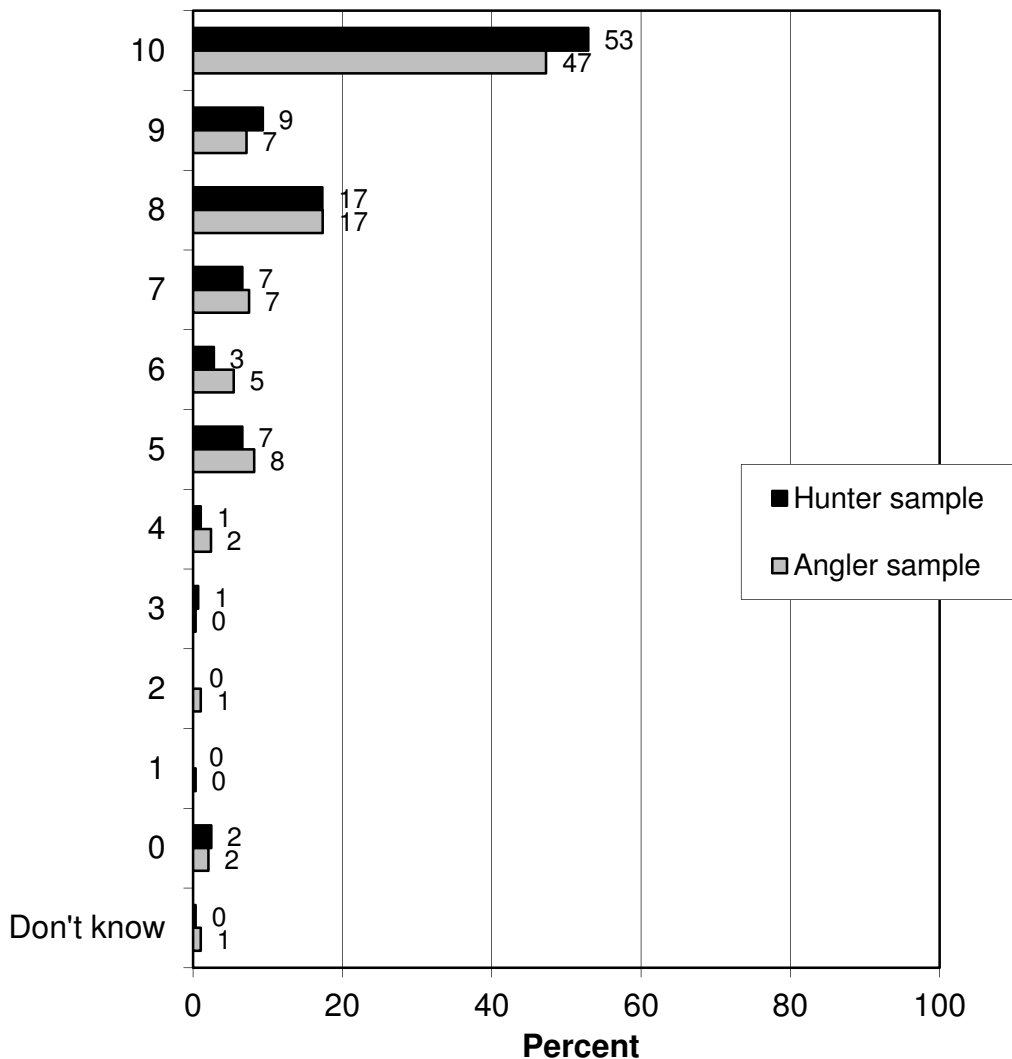
saltwater (Pennsylvania, which has only a small amount of tidal waters in the Delaware River at the eastern extreme of the state), to which Maryland’s saltwater opportunities may be quite attractive and which, obviously, requires the angler to travel. However, saltwater anglers are not much different from freshwater anglers (the graph also includes anglers overall as a point of reference).

Q172. In your opinion, are [hunting / fishing] opportunities in Maryland better, about the same, or worse than [hunting / fishing] opportunities in [STATE OF RESIDENCE]? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



Another indicator of satisfaction is whether the hunter or angler would recommend Maryland as a hunting or fishing destination. Given a 0 to 10 scale, where 0 is not at all likely and 10 is extremely likely, about half of hunters (53%) and anglers (47%) give the highest rating of “10.” Additionally, 89% of hunters and 85% of anglers give a rating above the midpoint (the midpoint is “5”).

Q173. How likely are you to recommend [hunting / fishing] in Maryland to a friend or family member, on a scale of 0 to 10 where 0 is not at all likely and 10 is extremely likely? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)

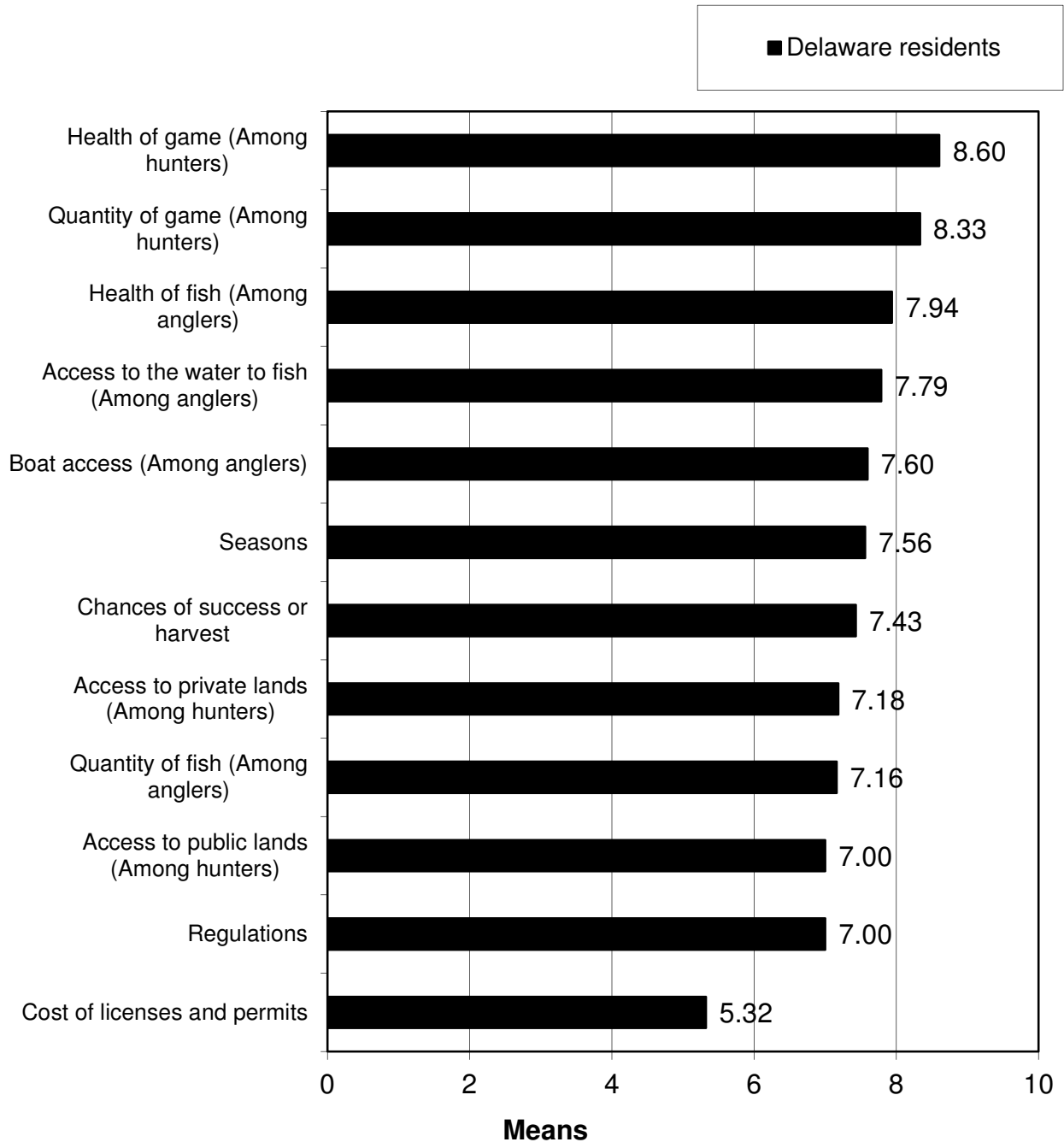


The survey also asked hunters and anglers to rate twelve items pertaining to hunting and fishing in Maryland (the same items that they also rated in their state of residence). The survey used the same 0 to 10 scale, with 0 being poor and 10 being excellent. There were four items particular to hunters, four items particular to anglers, and four items in common with both. The results are shown state-by-state. In general, residents of all six states give high ratings to the health of game and fish in Maryland, with those items ranked at or near the top among residents of all the states. Furthermore, the quantity of game in Maryland is ranked high by residents of all six states.

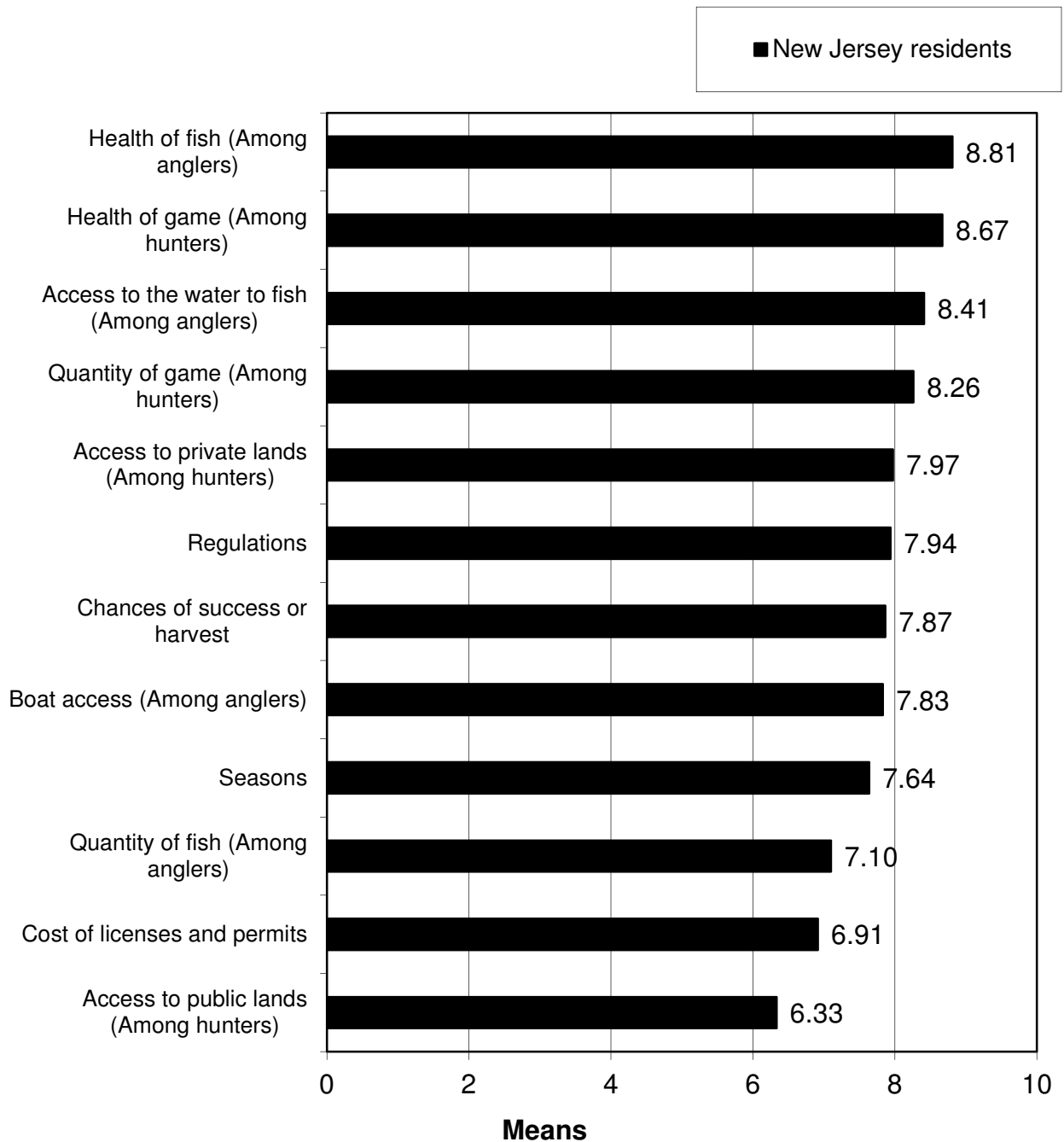
On the other hand, the quantity of fish in Maryland is ranked low in all states except West Virginia (where it is in the top half of the ranking). The cost of licenses and permits is ranked low in all states (perhaps because all the people in the survey who bought a license had to purchase a nonresident license, which will typically cost more than a resident license in their home state). Access to public lands for hunting is ranked low by residents of all six states, as well; access to private lands for hunting in Maryland receives low ratings from residents of Pennsylvania, Virginia, and West Virginia.

These graphs start on the next page.

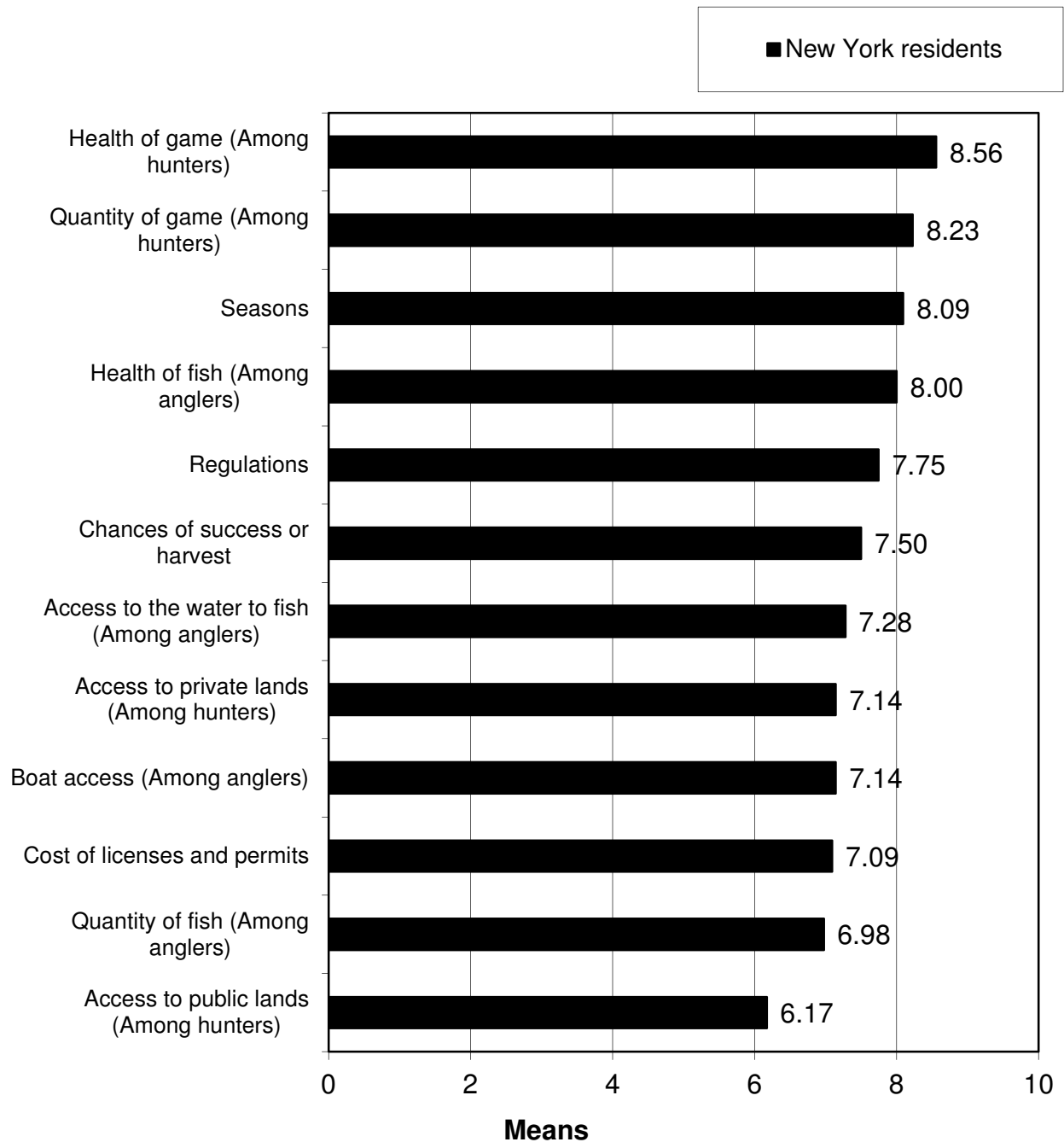
Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



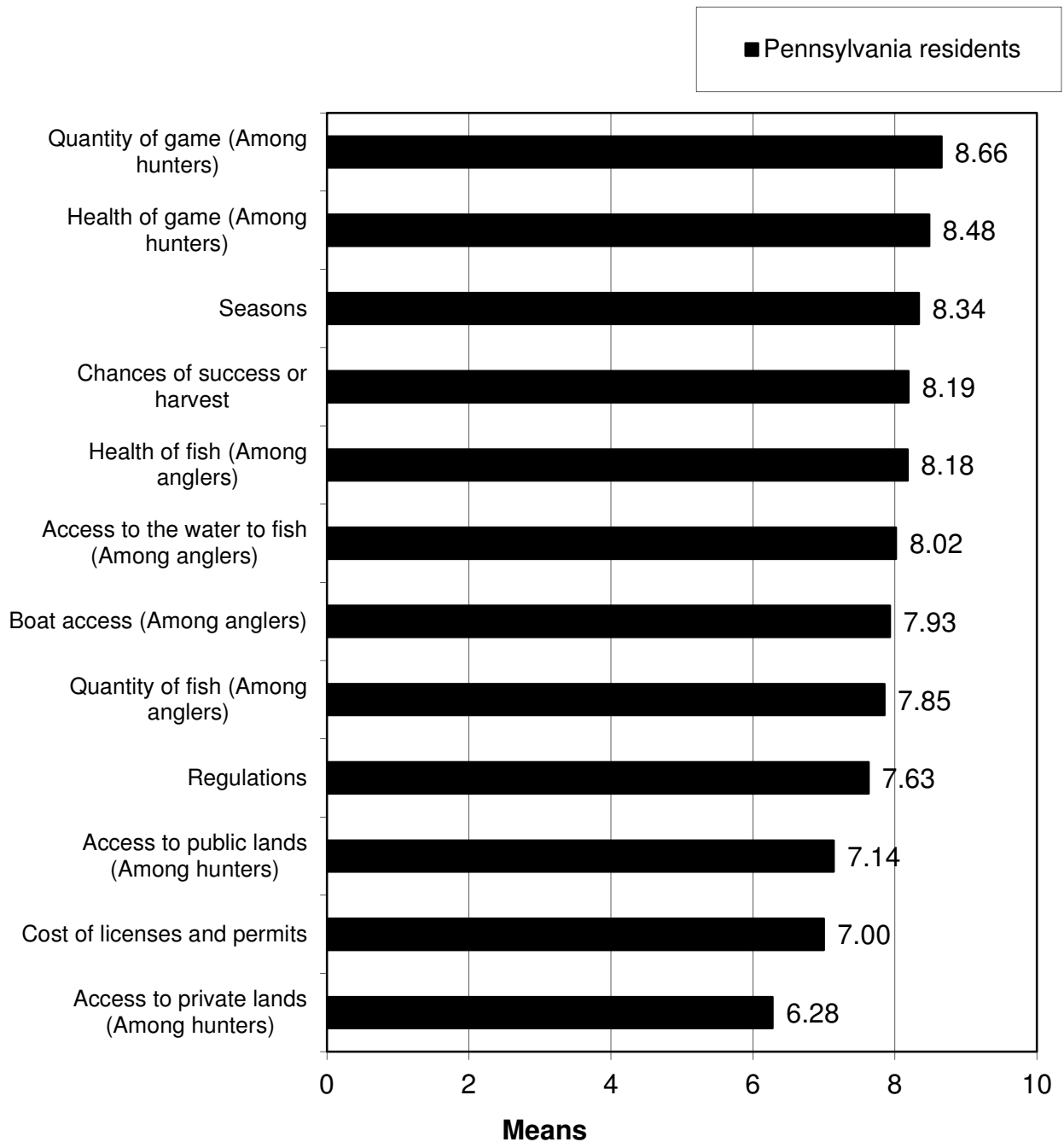
Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



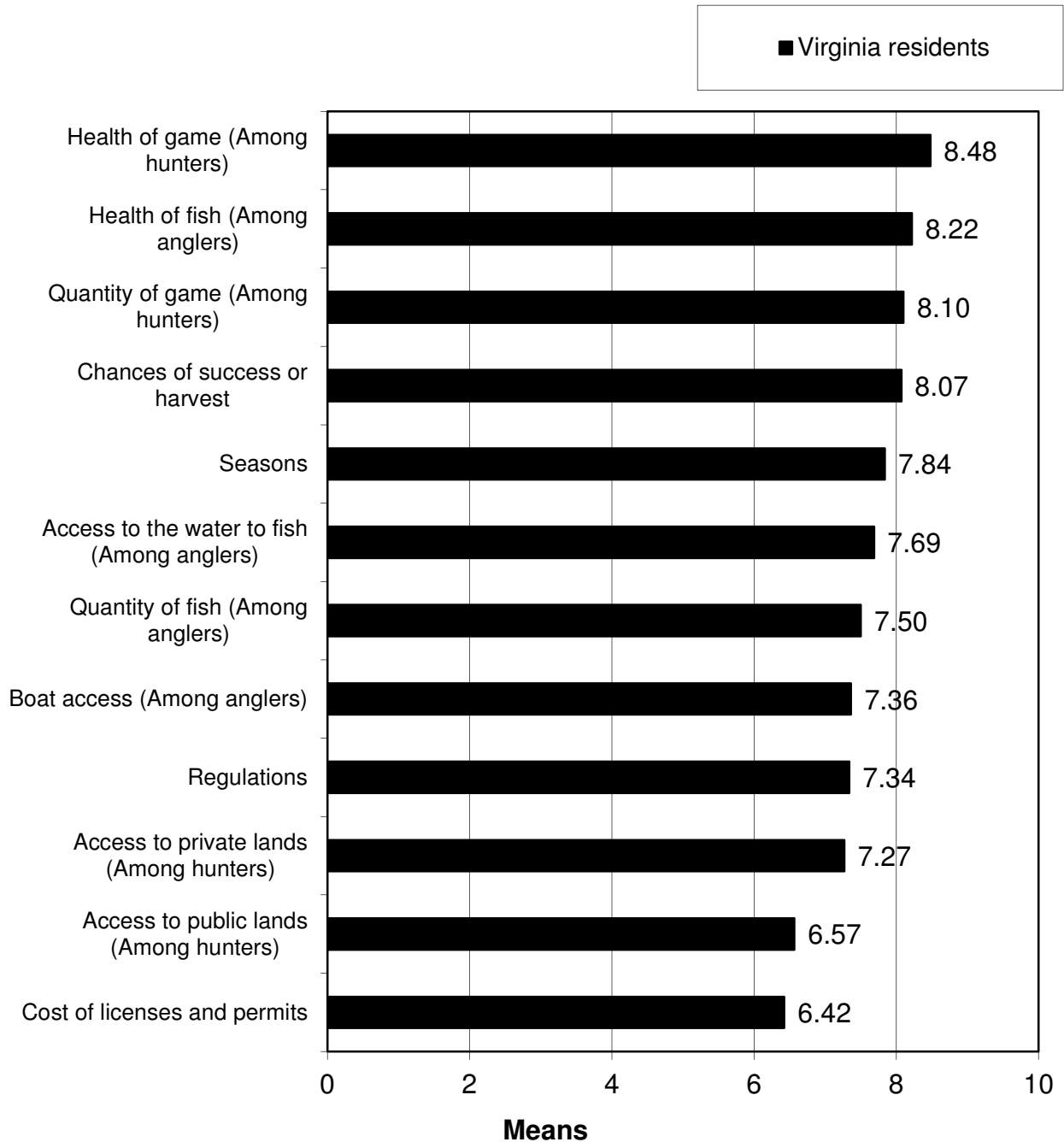
Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



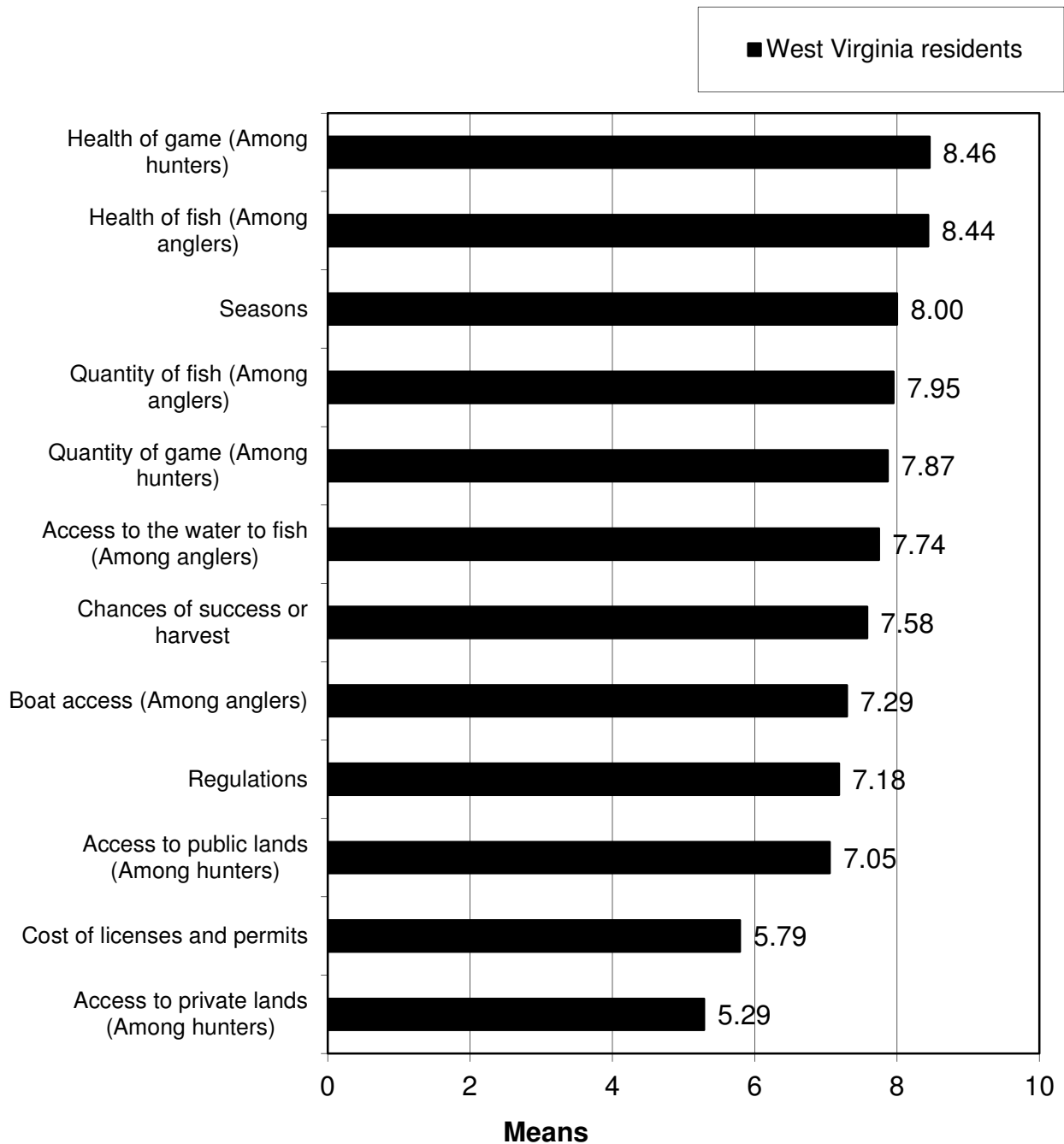
Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)

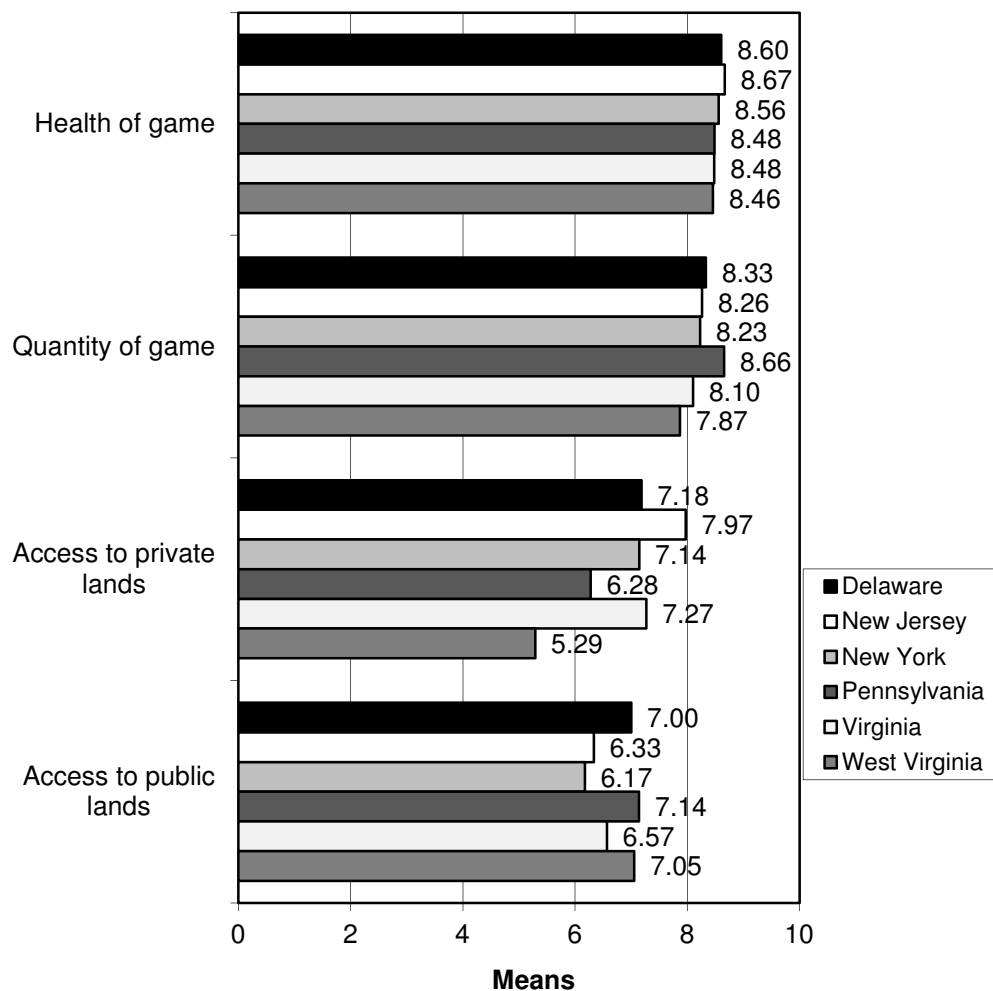


Q179-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)

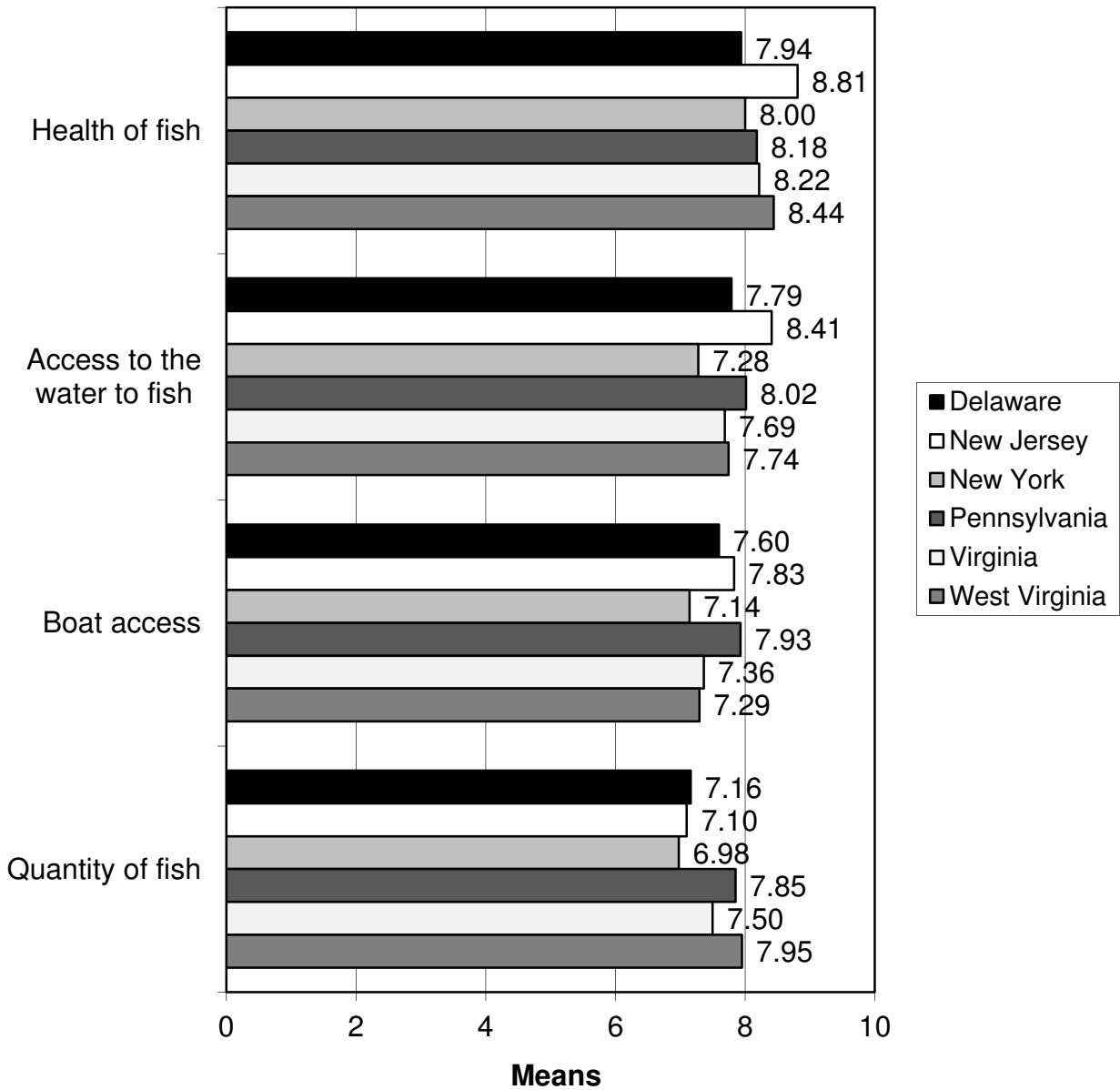


It is also instructive to see the ratings of the items compared state-by-state. The three following graphs show all states on the same graph. Among the notable findings, ratings of access to private lands for hunting in Maryland are quite variable from state to state, being relatively low by Pennsylvania and West Virginia residents. The ratings of the cost of licenses and permits in Maryland are also variable across the six states in the study, being lowly rated by Delaware residents, West Virginia residents, and Virginia residents.

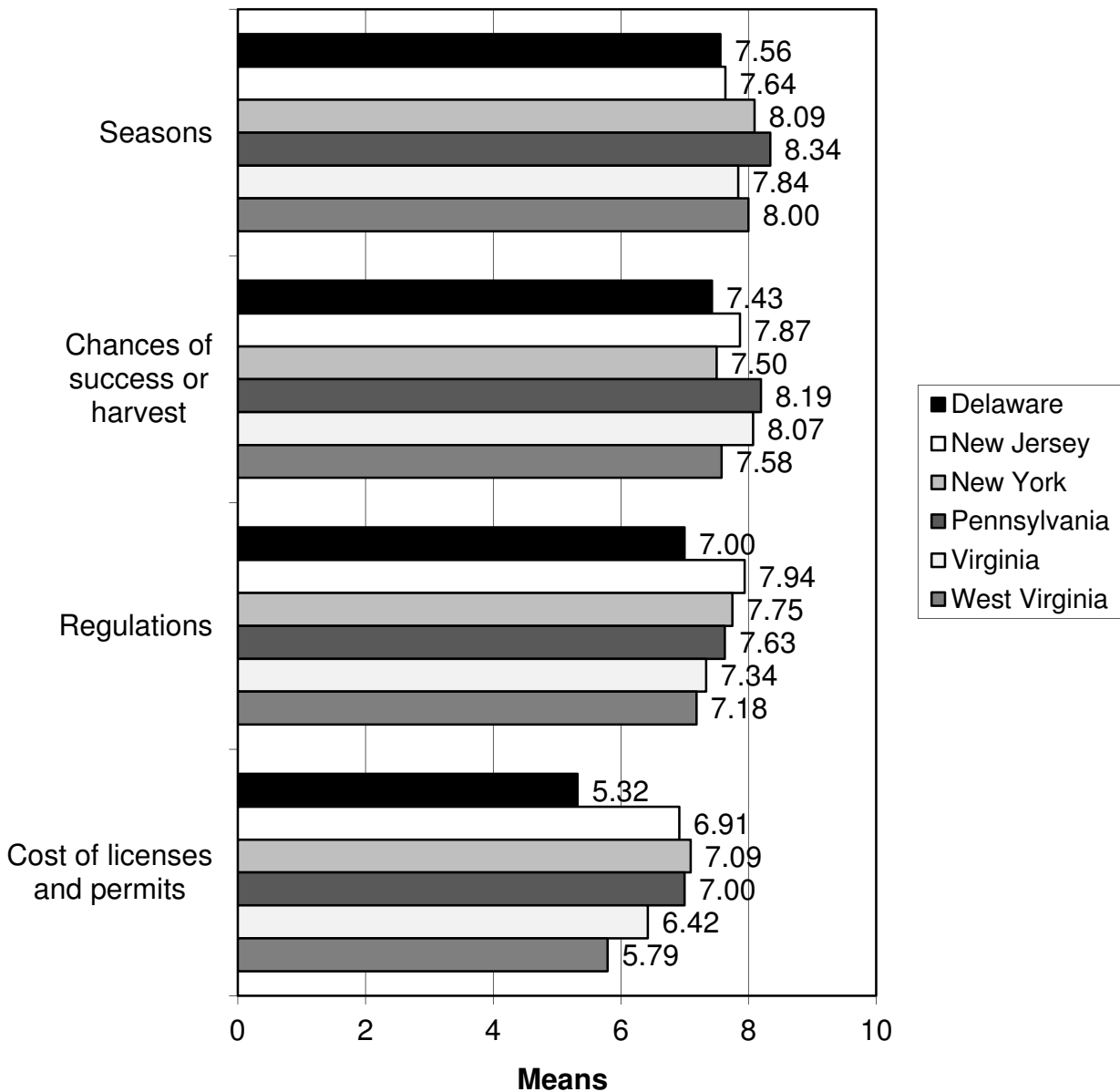
Q179-182. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to hunt in the past 3 years.)



Q184-187. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to fish in the past 3 years.)

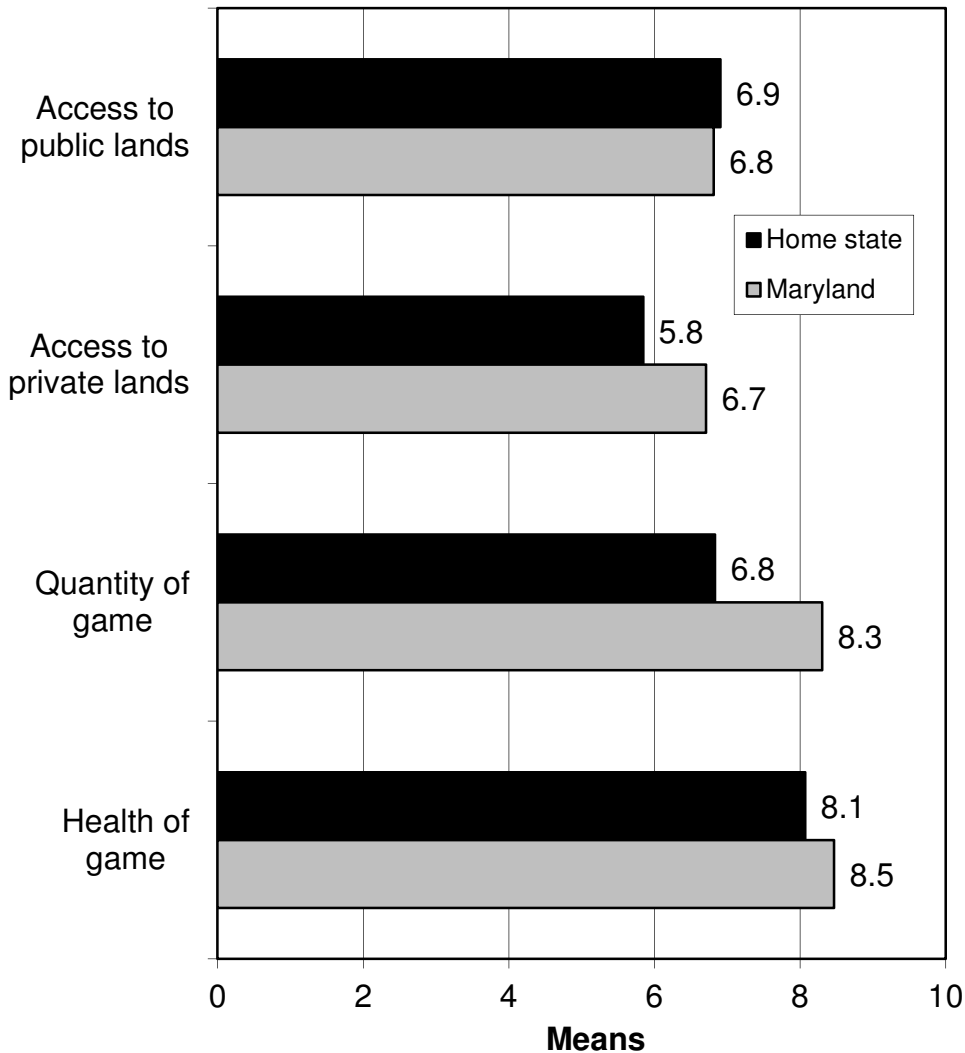


Q189-192. How would you rate this in Maryland, on a scale of 0 to 10, where 0 is poor and 10 is excellent? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)

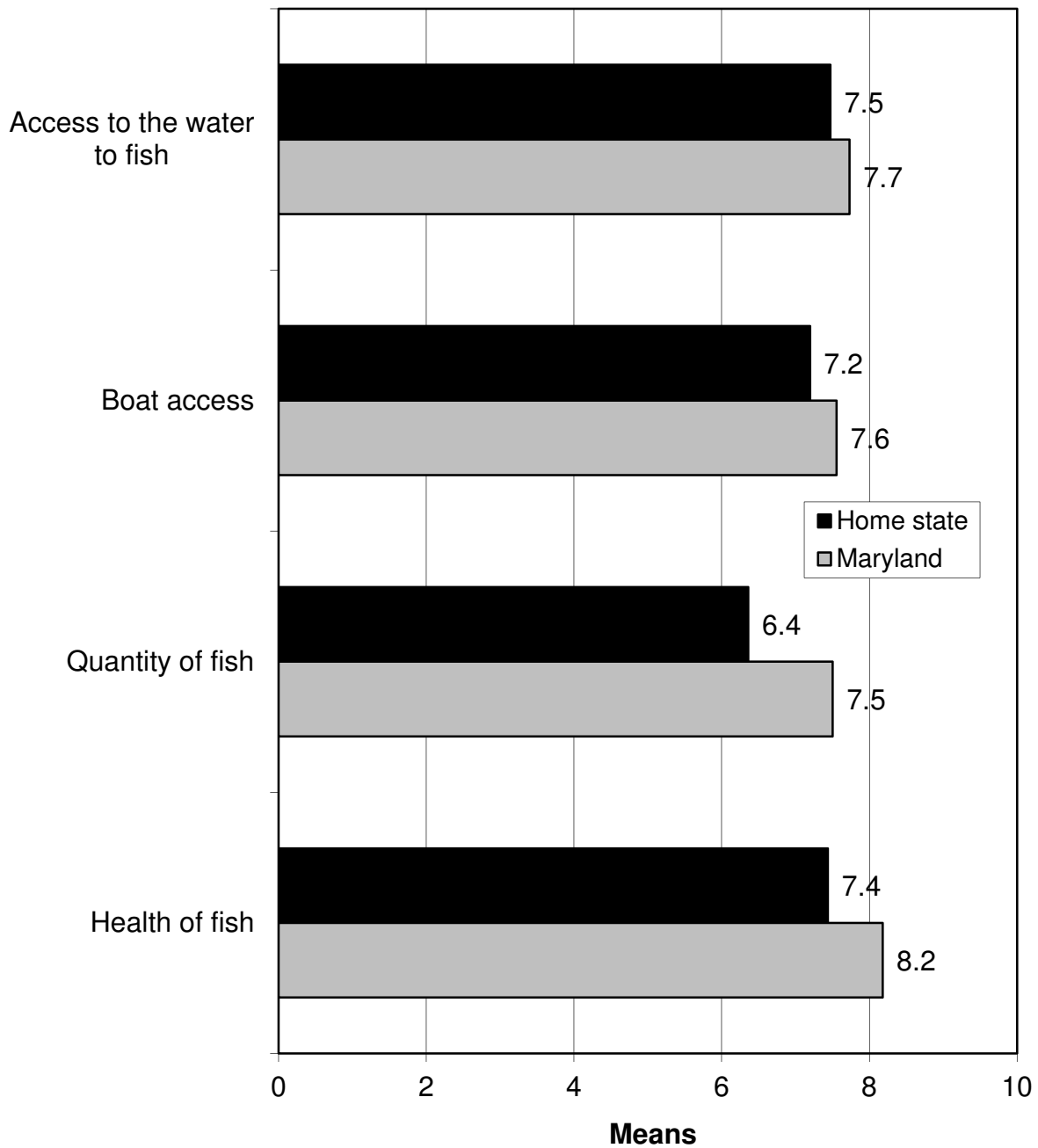


Finally, the last analysis in this section shows how these ratings of the items in Maryland compare with hunters' and anglers' home states. Among the findings, the quantity of game is rated markedly higher in Maryland than in hunters' home states, and the quantity of fish is rated higher in Maryland than in anglers' home states.

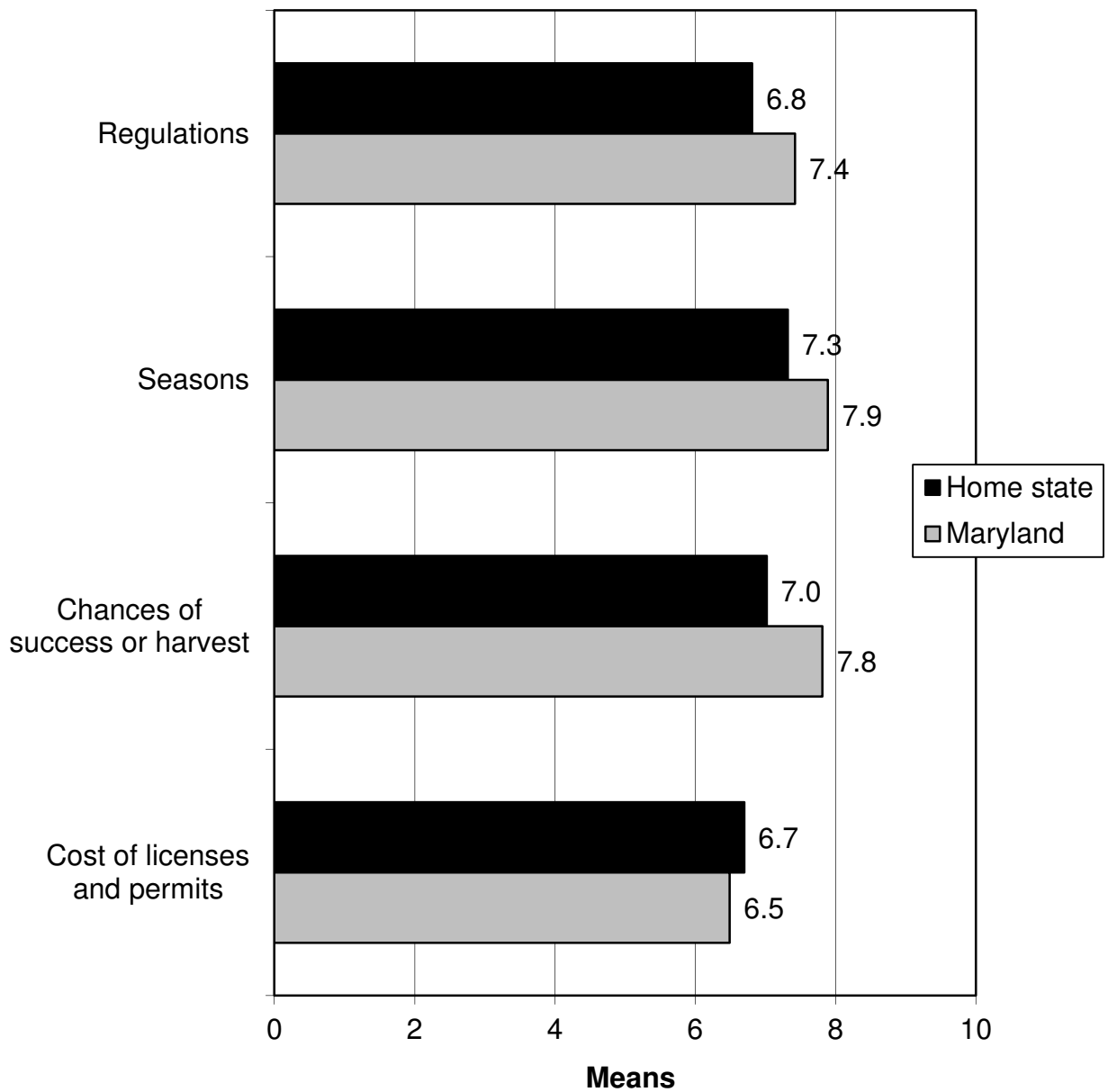
Q80-83 and Q179-182. How would you rate this in [STATE OF RESIDENCE / Maryland], on a scale of 0 to 10, where 0 is poor and 10 is excellent?



Q85-88 and Q184-187. How would you rate this in [STATE OF RESIDENCE / Maryland], on a scale of 0 to 10, where 0 is poor and 10 is excellent?



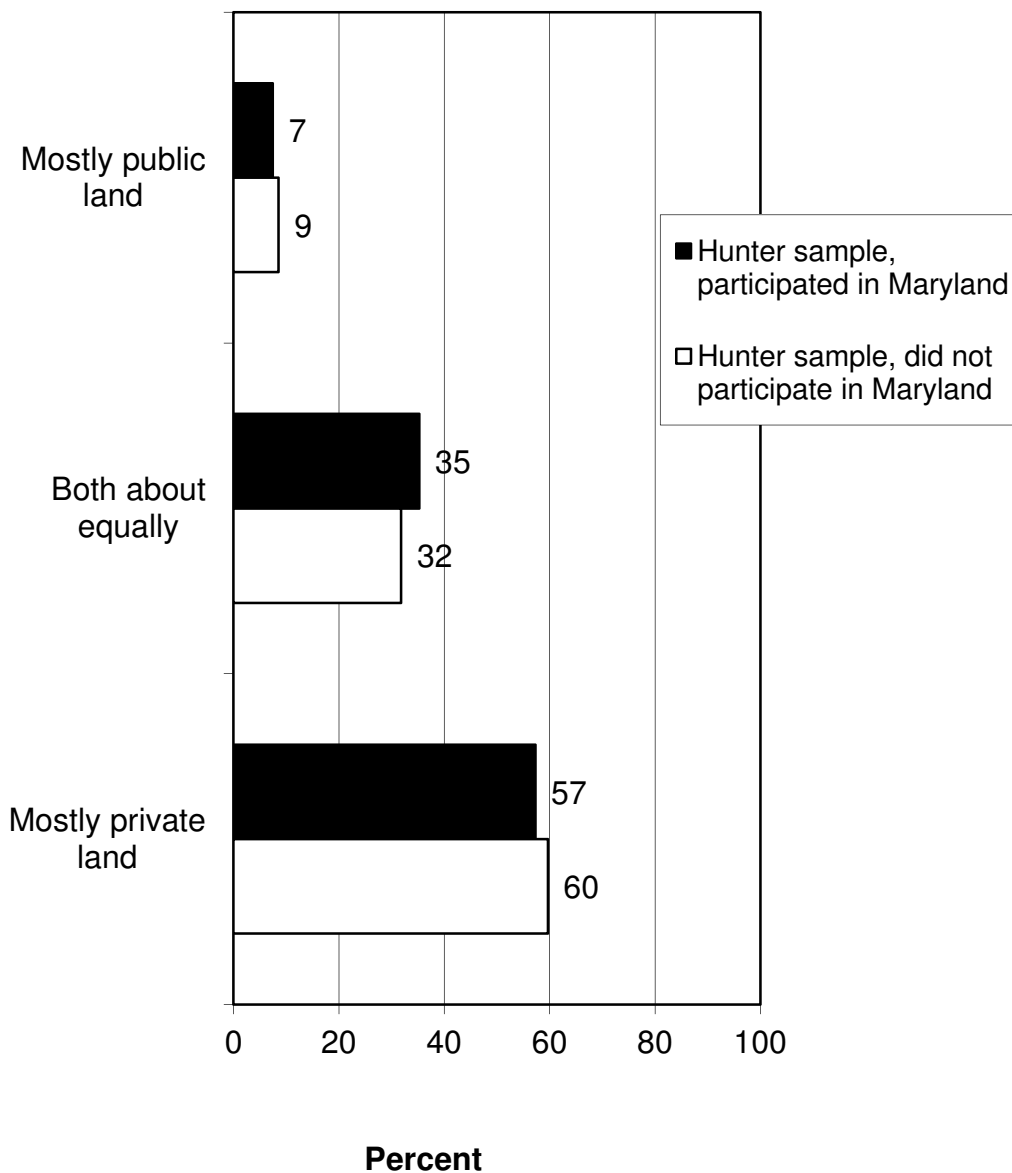
Q90-93 and Q189-192. How would you rate this in [STATE OF RESIDENCE / Maryland], on a scale of 0 to 10, where 0 is poor and 10 is excellent?



LOCATION OF HUNTING AND FISHING: TYPES OF LAND, TRAVEL DISTANCES

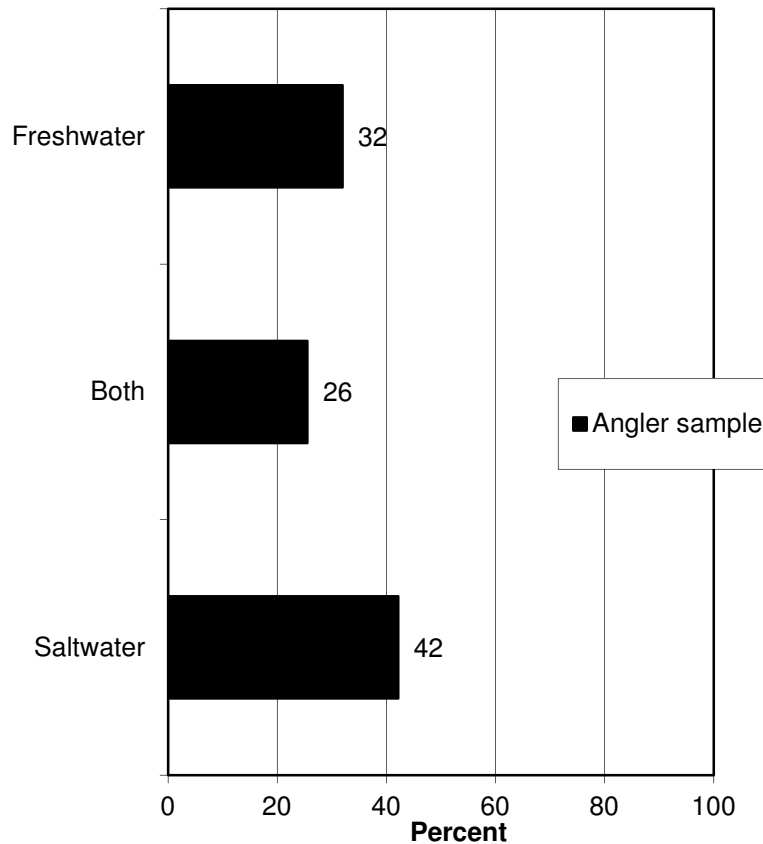
Question 24 asked about hunting on public or private land (or both). It found that private land is much more important to the hunters from the six study states, regardless of whether these hunters had traveled to Maryland to hunt or not. This suggests that private land will be integral in any plans to encourage out-of-state hunters to come to Maryland.

Q24. Do you typically hunt mostly public land, mostly private land, or both about equally? (Asked of hunter sample.)



Question 149 shows that a substantial portion of visiting anglers fish in saltwater: 68% fish some of their visiting time in saltwater, and 42% fish saltwater exclusively when they visit Maryland. Nonetheless, 58% fish freshwater some of the time in Maryland, with 32% fishing freshwater exclusively.

**Q149. Do you freshwater fish, saltwater fish, or both in Maryland each year?
(Asked of those who traveled to Maryland to fish in the past 3 years.)**

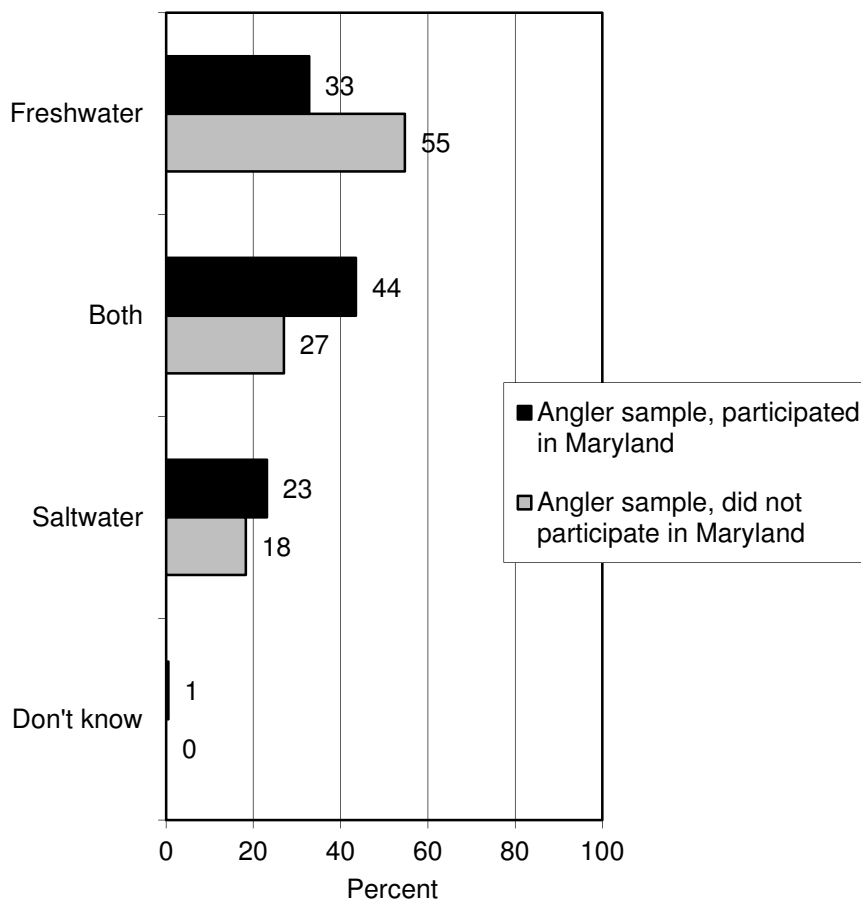


The above results are in line with the results previously discussed in this report in which 47% of anglers would be interested in saltwater exclusively (if they were to go fishing in Maryland), compared to 36% being interested in freshwater exclusively, and 15% being interested in both. (See Question 242 in the section of this report titled, “Interest in and Likelihood to Go Hunting and Fishing in Maryland.”)

It is interesting to see the results vis-à-vis freshwater versus saltwater in the preferred locations within anglers’ states of residence (for Delaware, New Jersey, New York, and Virginia that offer plenty of saltwater fishing opportunities). Those anglers who travel to Maryland to fish from the four aforementioned states are much more likely to fish in saltwater, compared to those anglers who do not travel to Maryland. This suggests that many of those anglers fishing in Maryland in saltwater are fishing in saltwater in their home state, as well. Therefore, not only does a market

exist for saltwater fishing among those who do not have the opportunity in their home state (e.g., West Virginia), but a market exists among saltwater anglers from states that have their own saltwaters for fishing.

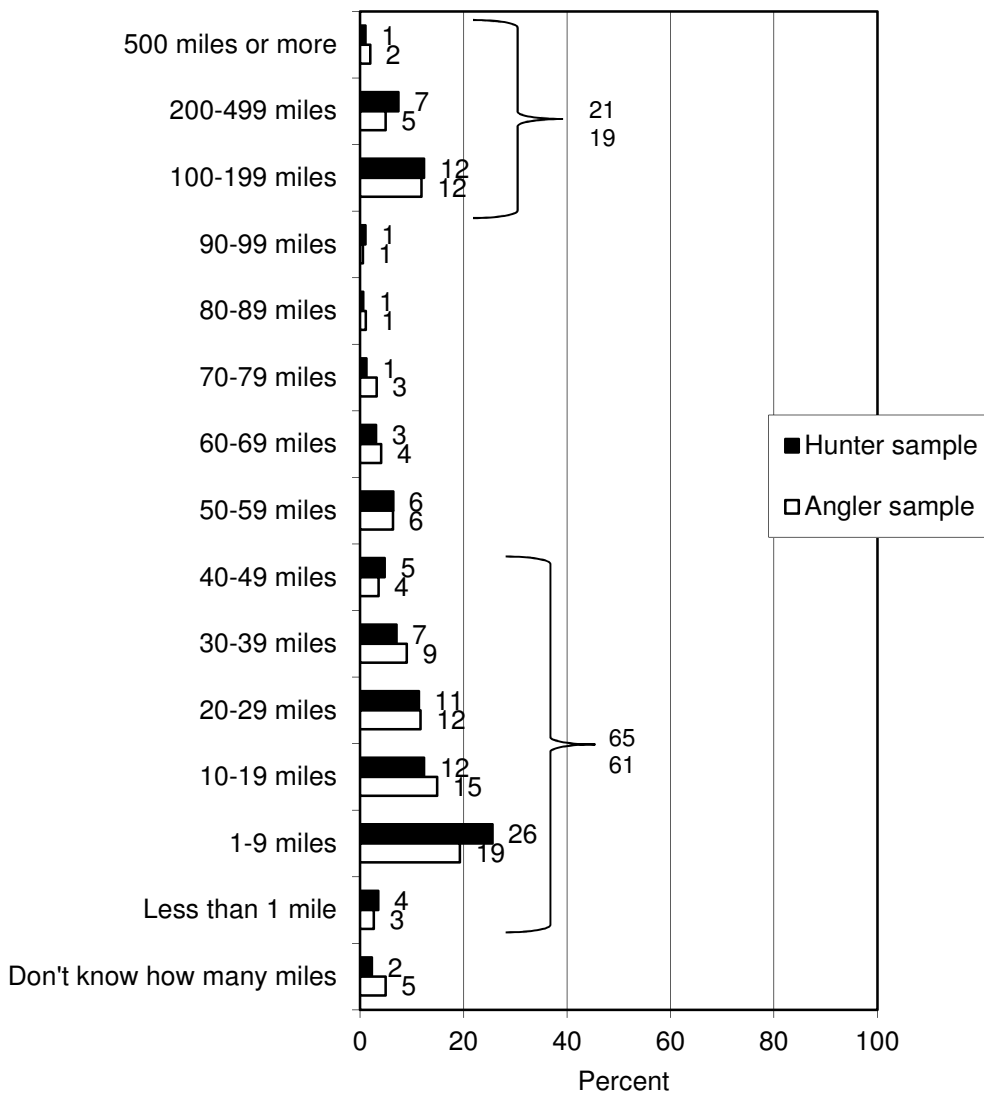
Q60. Do you freshwater fish, saltwater fish, or both in [STATE OF RESIDENCE] each year? (Asked of those who fished in their state of residence in the past 3 years and whose state of residence is Delaware, New Jersey, New York, or Virginia.)



Other results presented in the section of the report titled “Interest in and Likelihood to Go Hunting and Fishing in Maryland” are worth repeating here, as they pertain to the desired locations for fishing. Those results found that 61% of anglers are most interested in fishing from a boat in Maryland, 20% are most interested in fishing from a shore/the bank, and 5% are most interested in fishing from a pier. Clearly, locations that allow for fishing from a boat are highly important for Maryland to attract out-of-state anglers.

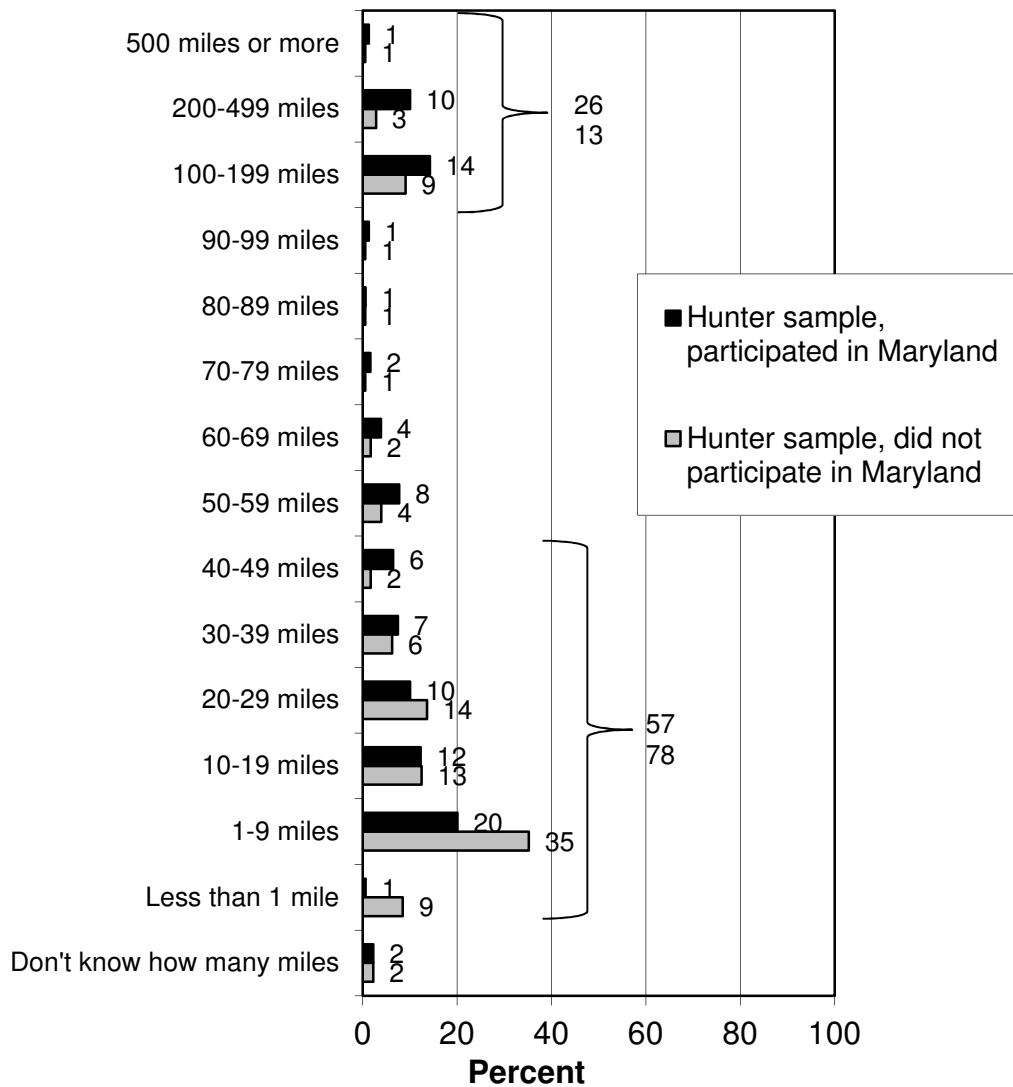
Another line of questioning pertaining to location asked hunters and anglers how far they typically travel to hunt and fish. The analysis looks at this question in several ways. The first way compares hunters and anglers, and it finds that hunters have a higher percentage going less than 10 miles, compared to anglers. Among hunters, 30% go no more than 10 miles; of anglers, 22% go no more than 10 miles. At longer distances, the two groups even out, with about two-thirds of each going less than 50 miles (65% of hunters and 61% of anglers). Interestingly, there are avid participants (measured by distance traveled) who go more than 100 miles: 21% of hunters and 19% of anglers go that distance.

Q25. Regardless of the type of land, how far, in miles, do you typically travel one-way to [hunt / fish]?



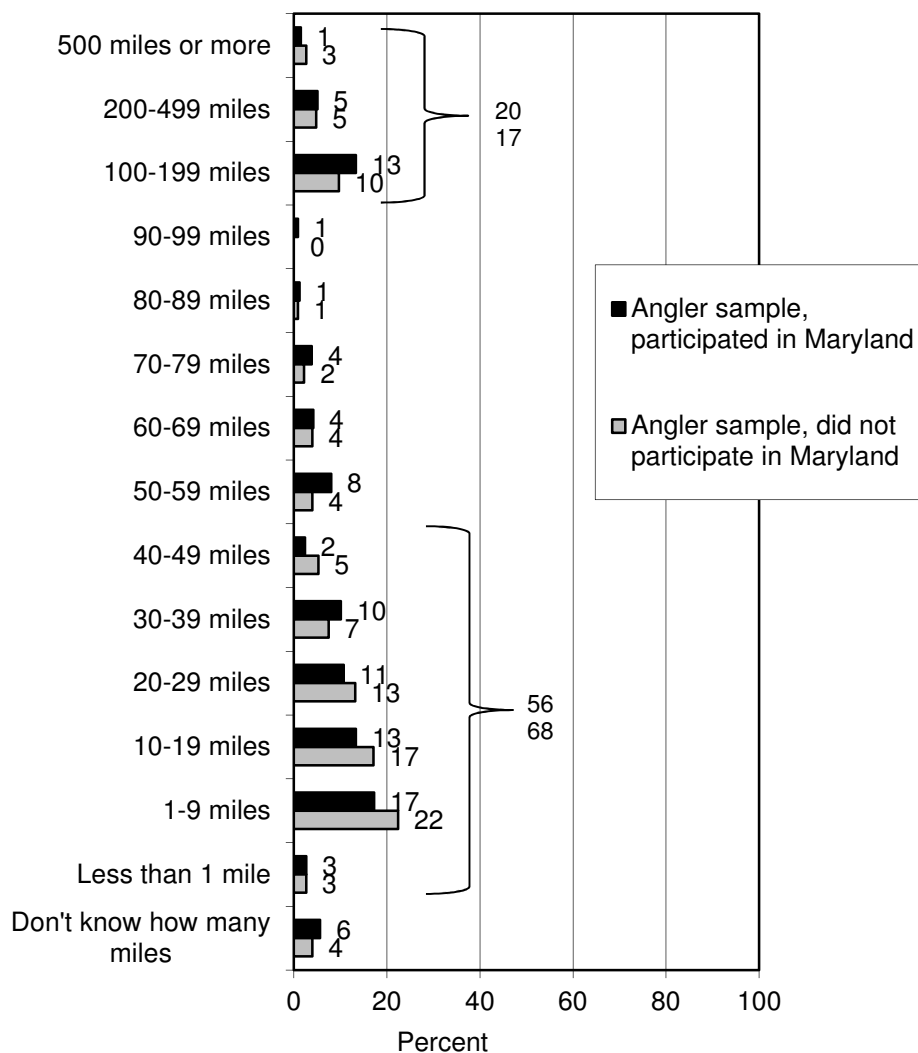
The analysis further looks at this question, comparing those hunters and anglers who participated in Maryland and those who did not. Not surprisingly, those who visited Maryland to do the activities traveled farther, in general, than those who did not. Nonetheless, it is useful to look at the results. More than three-fourths of hunters who did not hunt in Maryland (78%) went less than 50 miles to go hunting, and 44% went less than 10 miles. Among hunters who did travel in the past 3 years to hunt in Maryland, only 57% went no more than 50 miles, and only 21% went less than 10 miles.

Q25. Regardless of the type of land, how far, in miles, do you typically travel one-way to hunt?



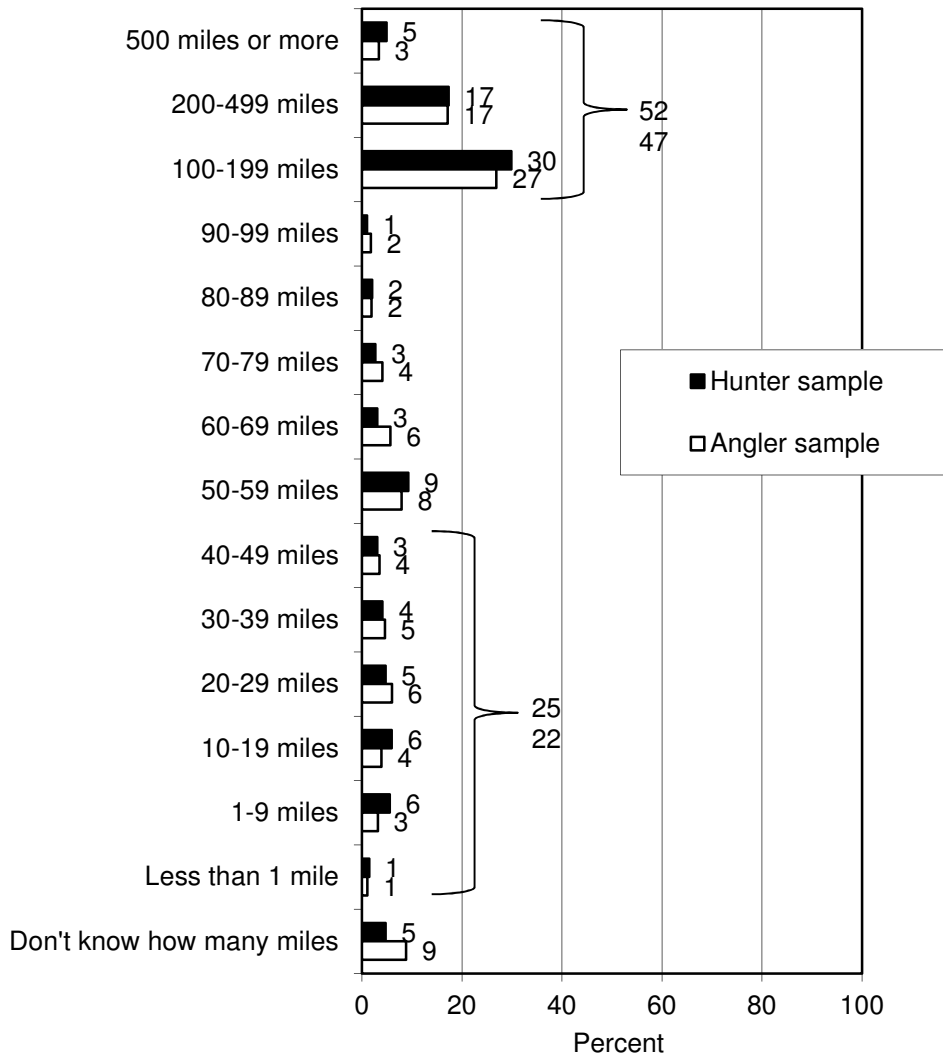
An analogous comparison was made among anglers, looking at those who went to Maryland to fish and those who did not. There is a less marked difference among anglers than among hunters; nonetheless, those anglers who did not visit Maryland to fish travel slightly less than those who did visit Maryland to fish (68% of anglers who did not visit Maryland compared to 56% of those who did visit Maryland responded with a typical travel distance of less than 50 miles).

Q25. Regardless of the type of land, how far, in miles, do you typically travel one-way to fish?



The survey also asked hunters and anglers how far they would be willing to travel for a single-day hunting or fishing trip. The same analyses were run: comparing hunters and anglers overall, then comparing those who visited Maryland and those who did not visit Maryland to do the activities. In distance willing to travel, hunters and anglers are not much different, as shown in the graph below.

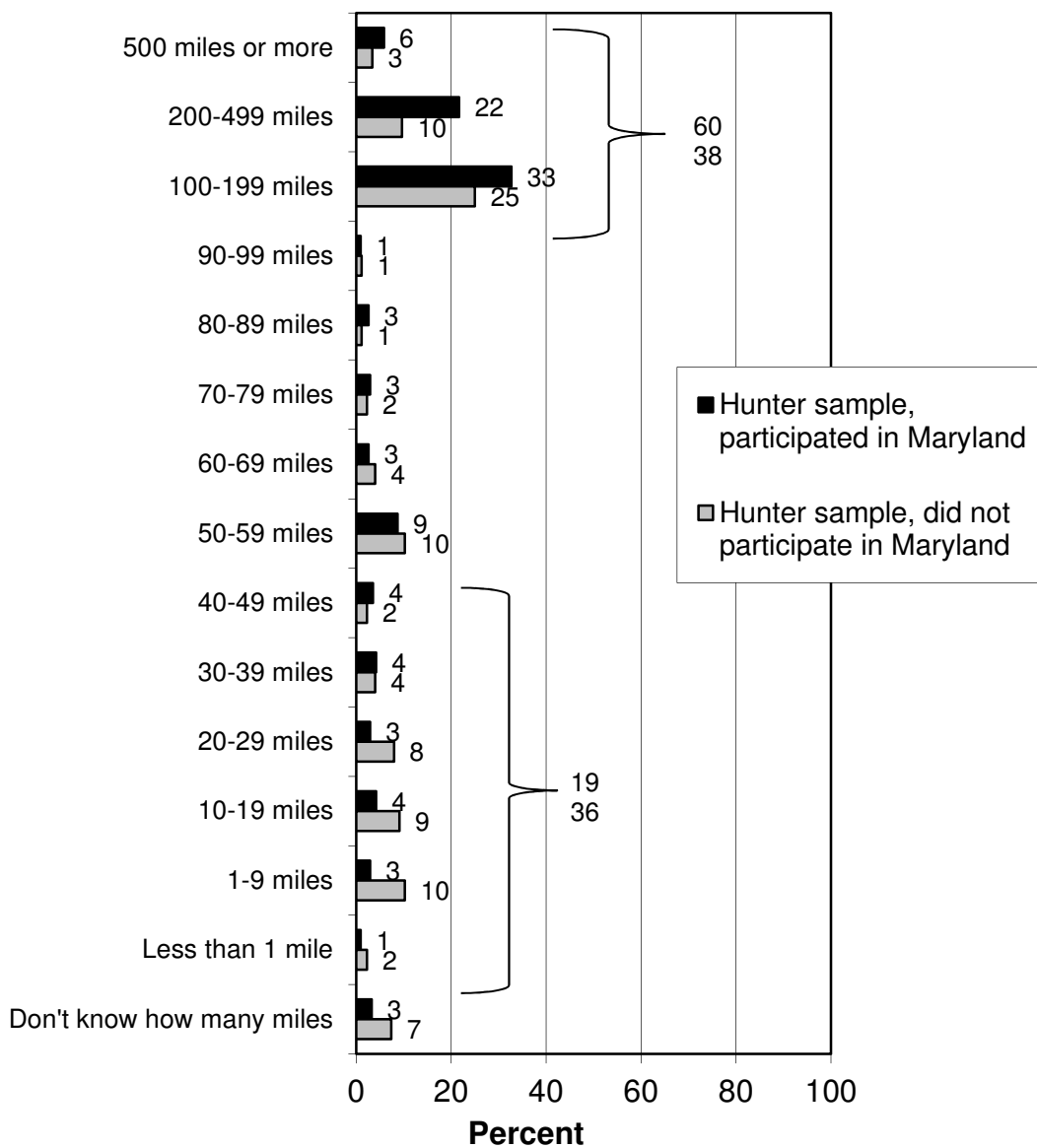
Q28. What's the farthest, in miles, you would be willing to travel one-way for a single-day [hunting / fishing] trip?



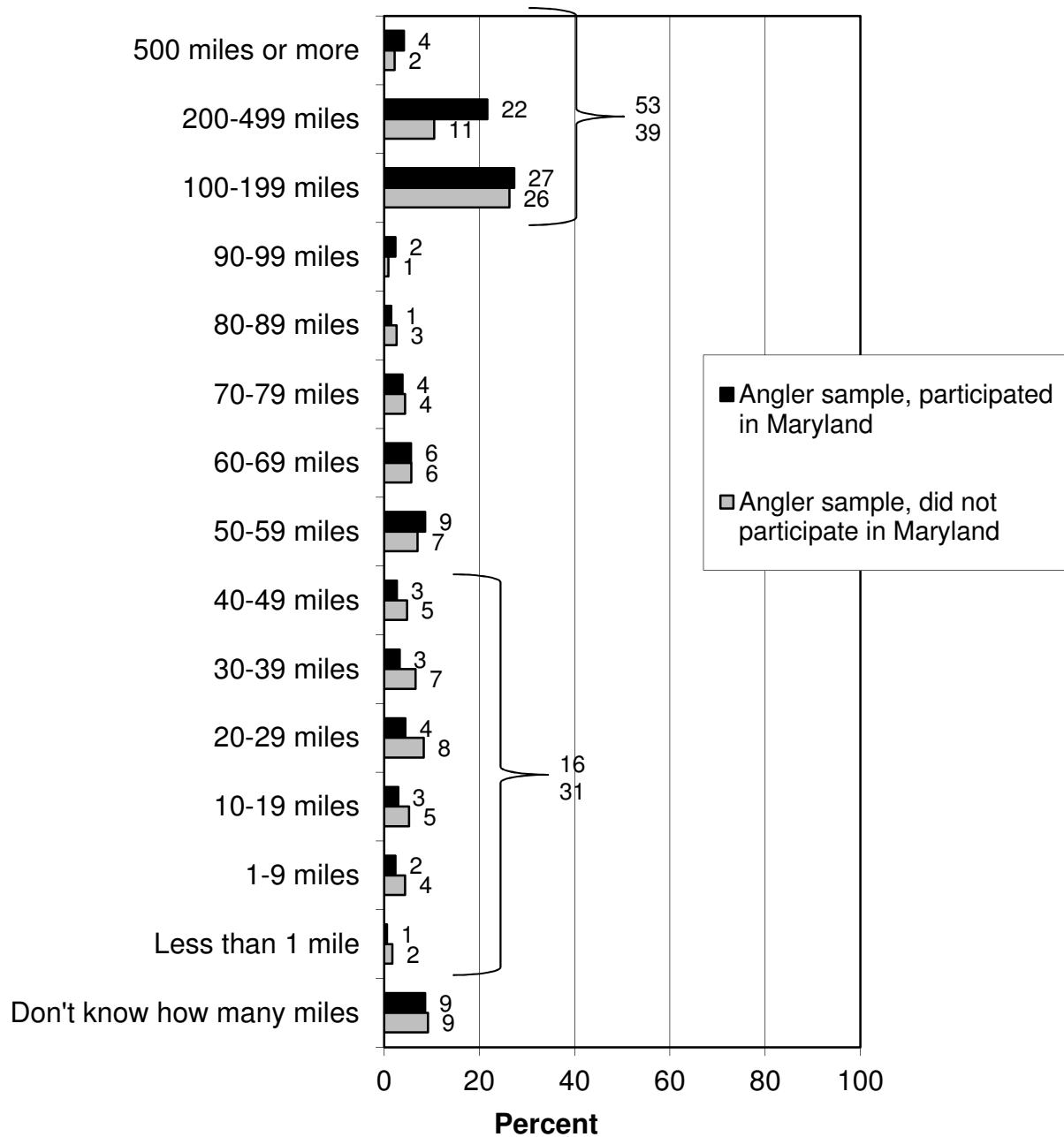
Other graphs on the following two pages show that a bit more than a third of hunters who did not travel to Maryland to hunt (36%) give a distance that they are willing to travel of less than 50 miles; however, nearly the same percentage of these hunters (38%) are willing to travel more

than 100 miles for a single-day hunting trip, making this latter group an ideal target market for Maryland hunting. The results among anglers are similar (31% of those who have not visited Maryland to fish will not go more than 50 miles, but 39% are willing to travel more than 100 miles).

Q28. What's the farthest, in miles, you would be willing to travel one-way for a single-day hunting trip?

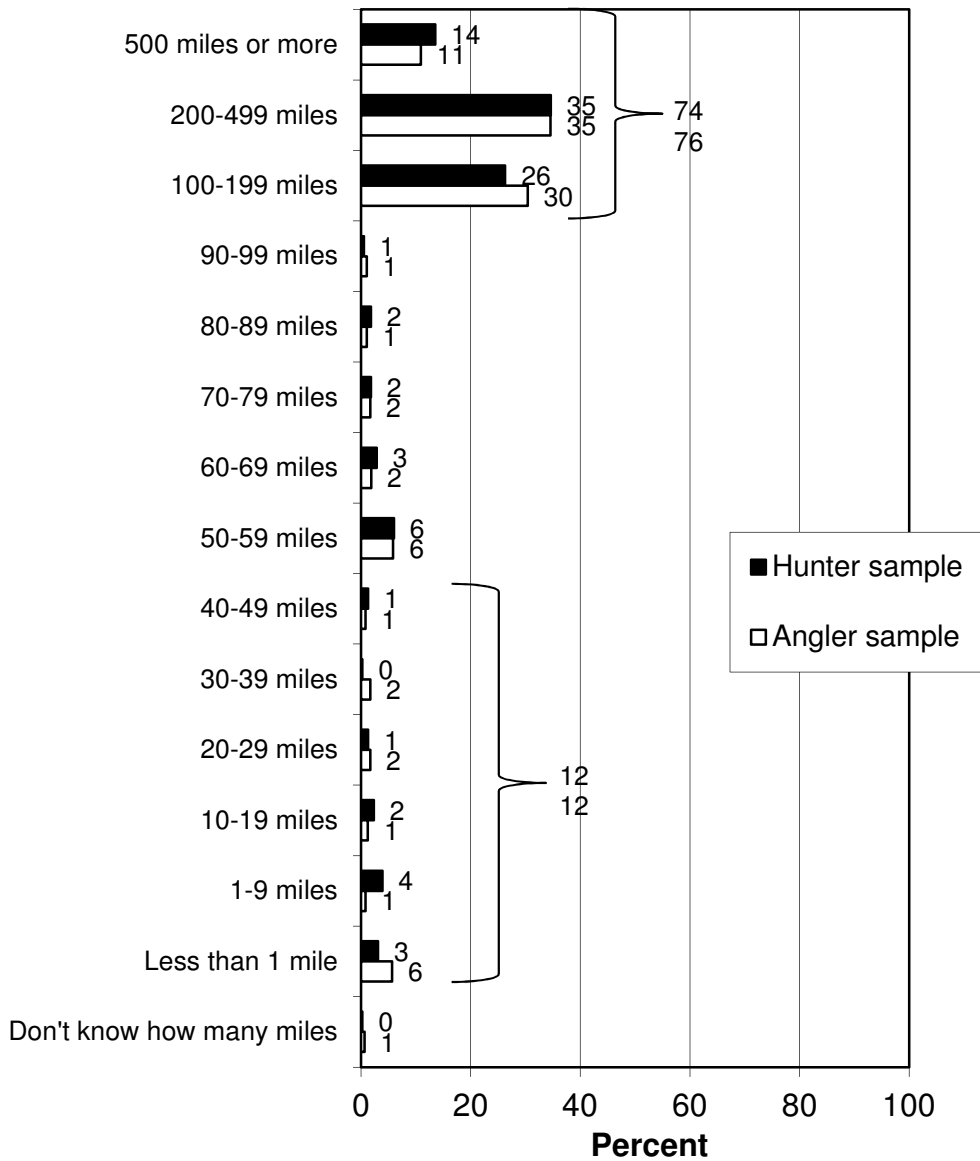


Q28. What's the farthest, in miles, you would be willing to travel one-way for a single-day fishing trip?

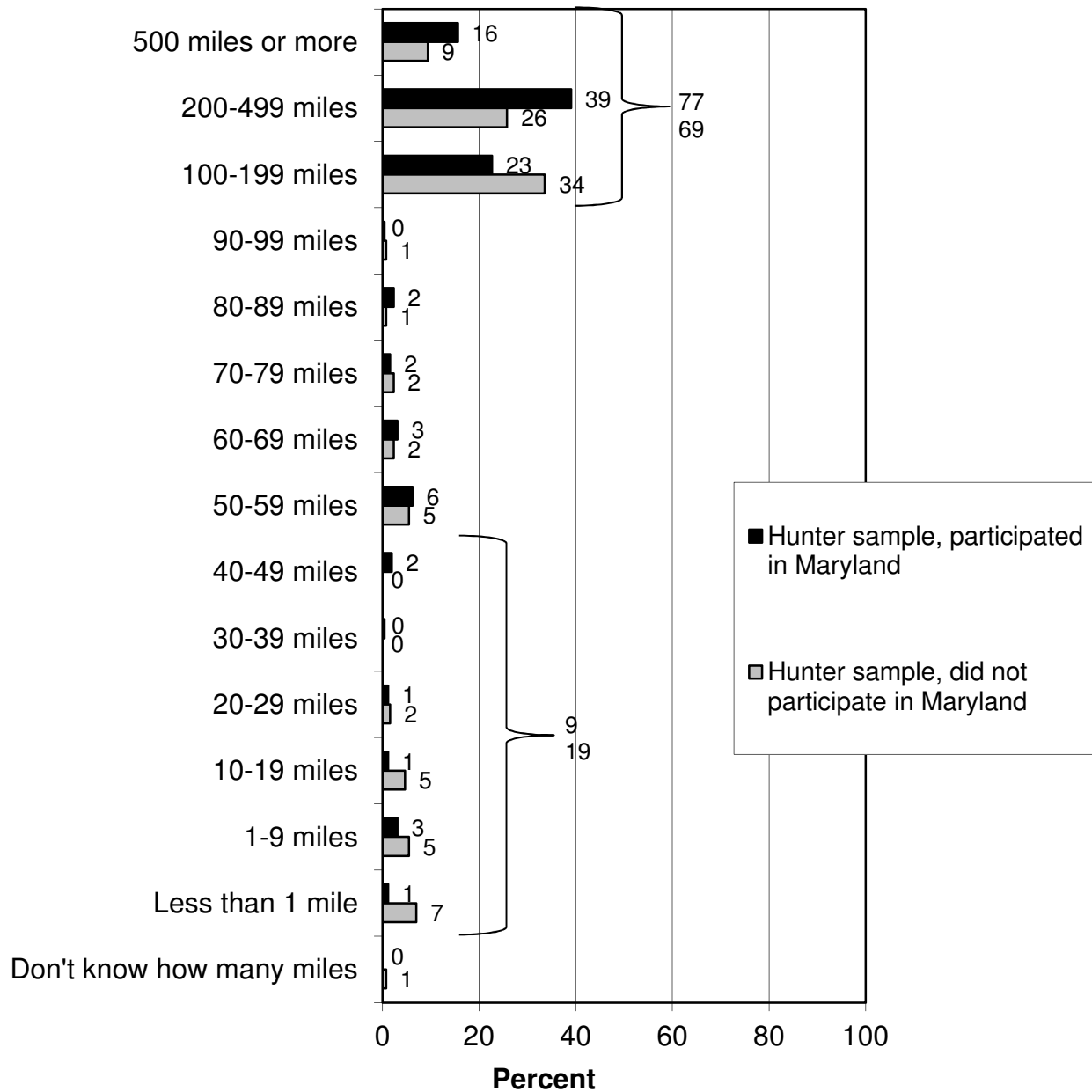


Finally regarding distance, the survey asked about distance willing to travel for *overnight* trips to hunt and fish. There is no marked difference between hunters and anglers (as shown on graph on this page). There are differences, however, between those who have traveled to Maryland previously and those who have not (as shown on the graphs on the two following pages).

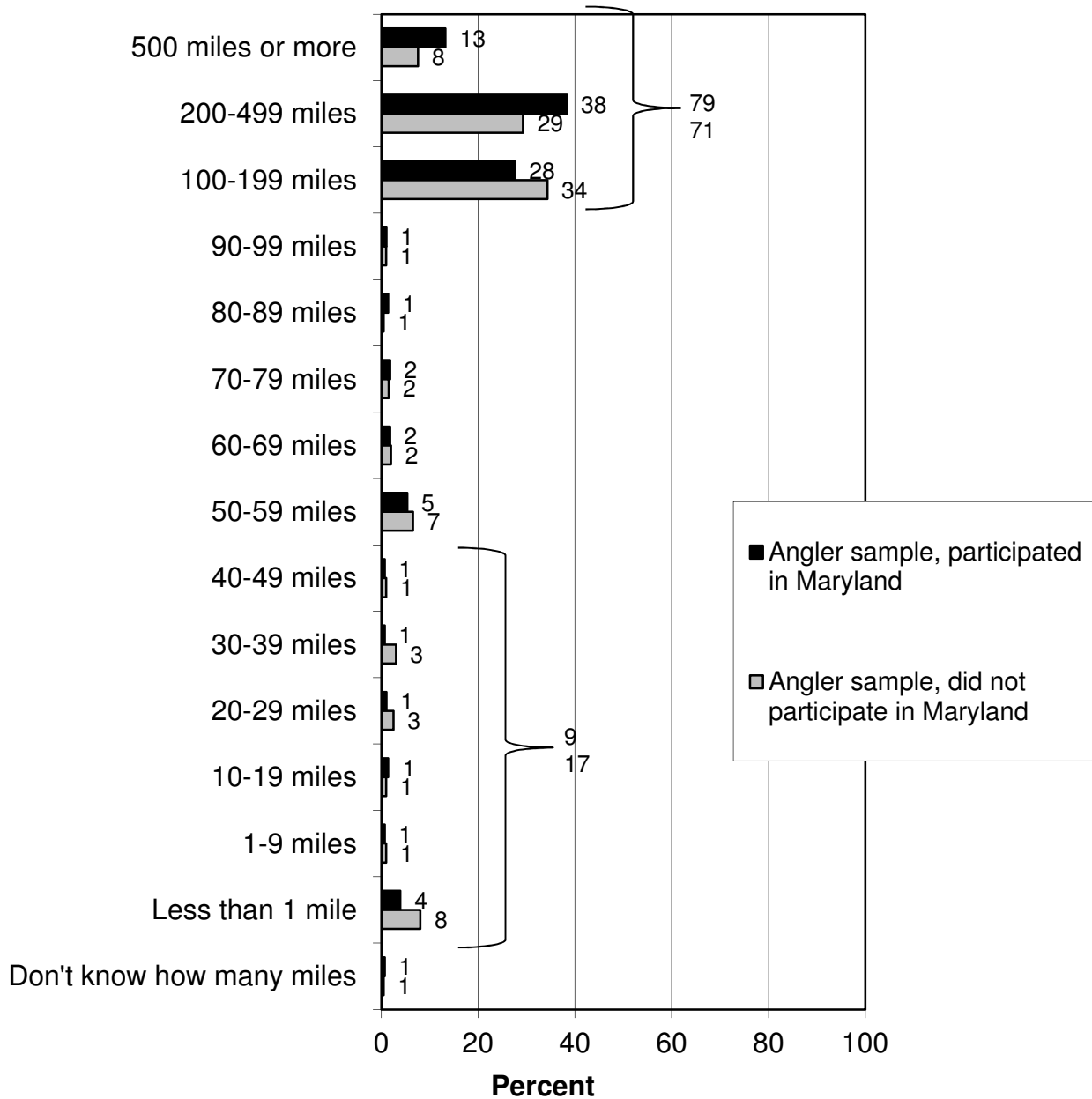
Q31. What's the farthest, in miles, you would be willing to travel one-way for an overnight [hunting / fishing] trip?



Q31. What's the farthest, in miles, you would be willing to travel one-way for an overnight hunting trip?



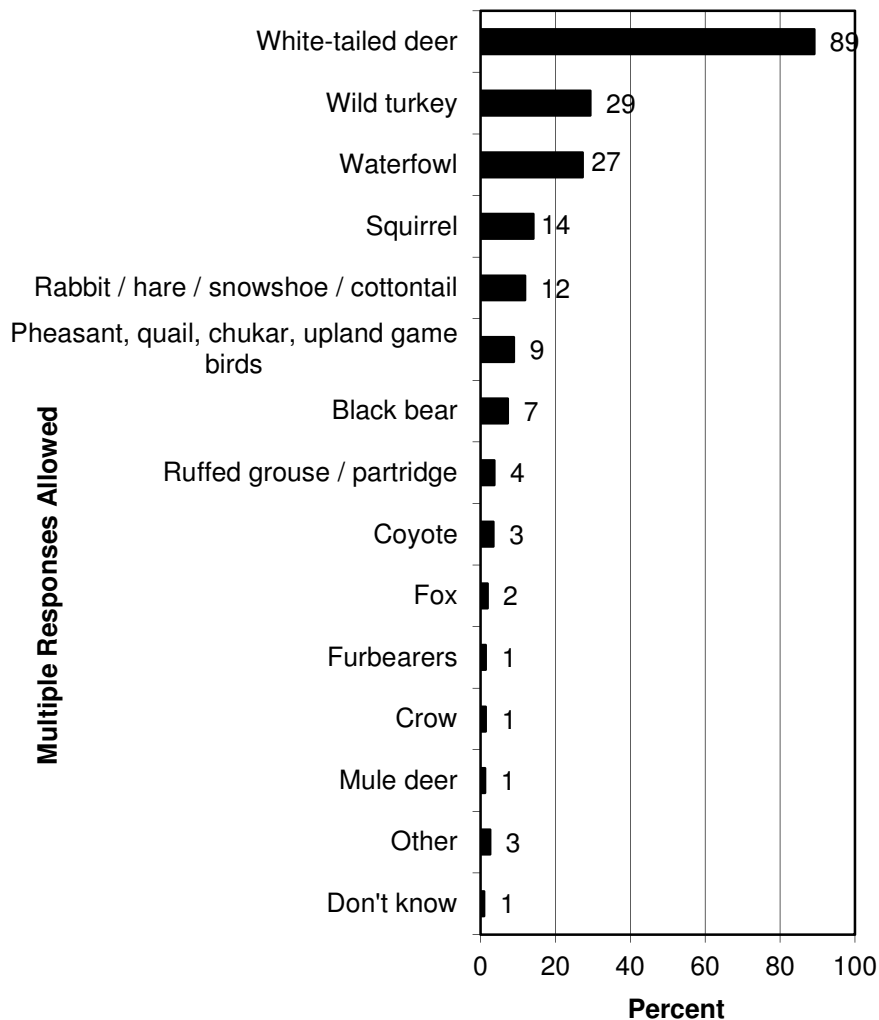
Q31. What's the farthest, in miles, you would be willing to travel one-way for an overnight fishing trip?



SPECIES HUNTED AND FISHED

This analysis first looks at the species that hunters hunt in their home states (the states of interest in this study being Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia). Among all hunters who hunted in their state of residence, 89% sought white-tailed deer, the overwhelmingly most popular species. Well behind this are wild turkey (hunted by 29% in their home state), waterfowl (27%), squirrel (14%), and rabbit (12%).

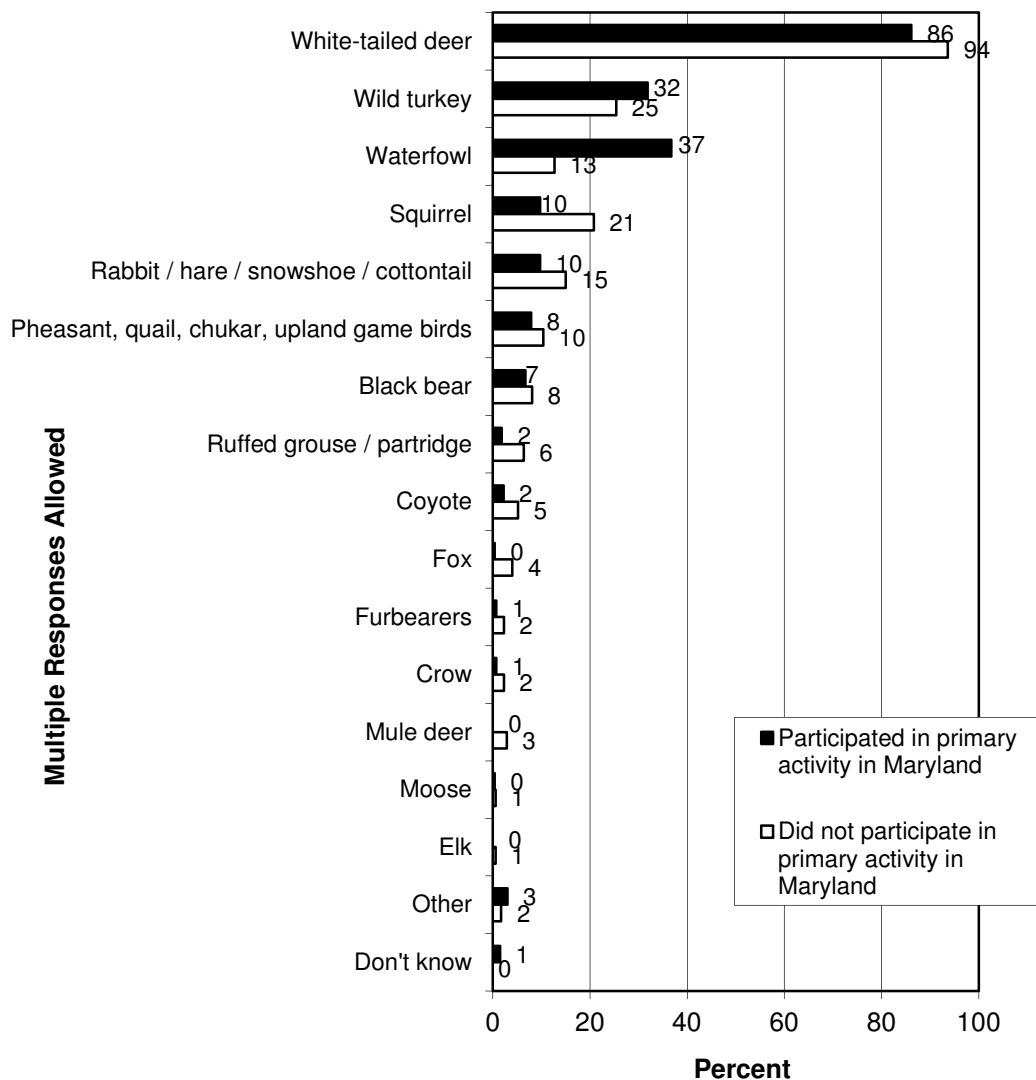
Q56. Which species do you typically hunt in [STATE OF RESIDENCE] each year? (Asked of those who hunted in their state of residence in the past 3 years.)



Another way to look at this question is to compare those who have visited Maryland to hunt and those who have not. Those hunters who have visited Maryland are more likely to seek waterfowl *in their home state* than are those who did not visit Maryland (37% of hunters who visited

Maryland to hunt versus 13% of those who did not visit Maryland to hunt). Certainly, then, this suggests the importance of waterfowl to Maryland’s nonresident hunters—they are hunting waterfowl in their home states as well.

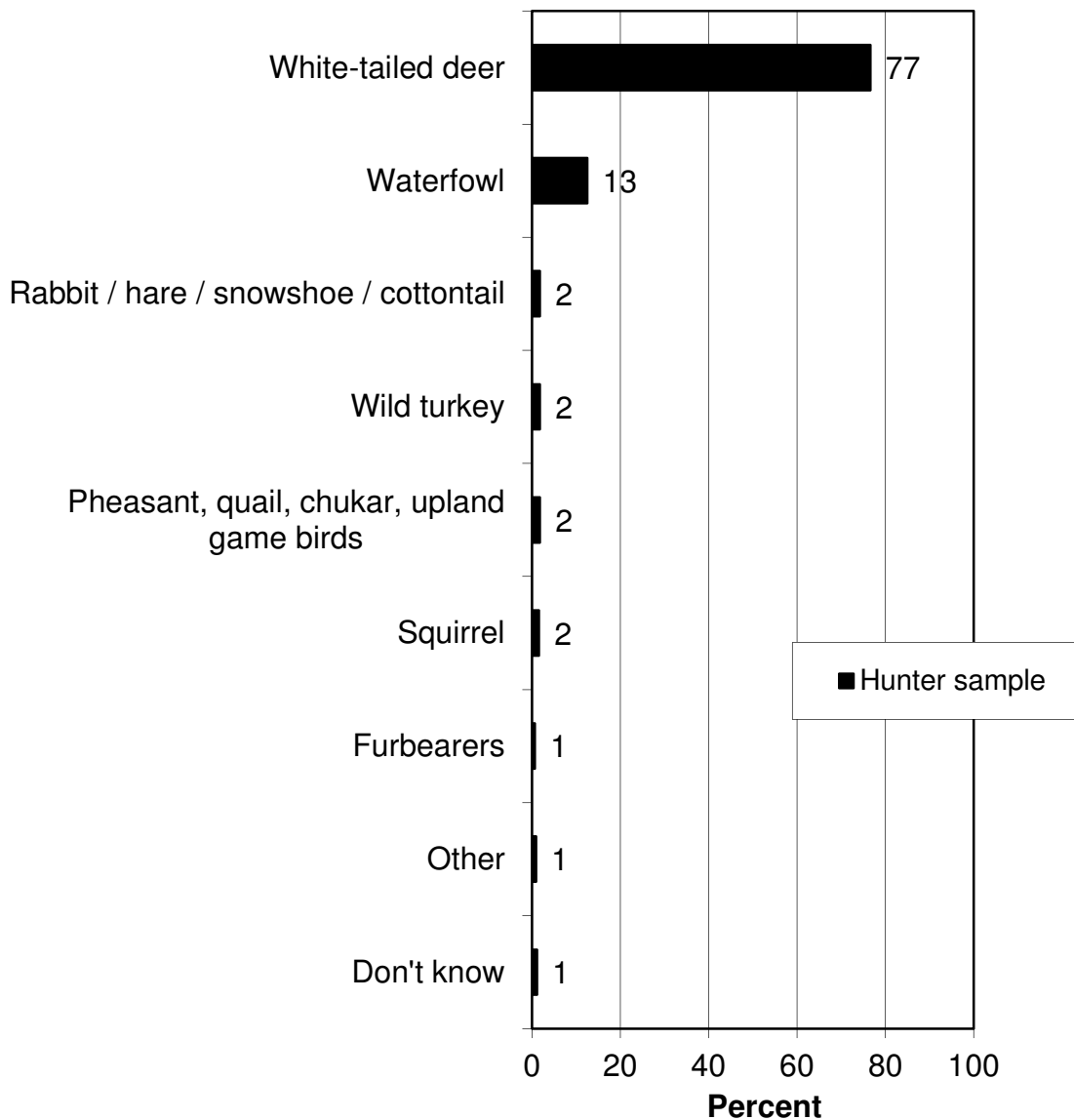
Q56. Which species do you typically hunt in [STATE OF RESIDENCE] each year? (Asked of those who hunted in their state of residence in the past 3 years.)



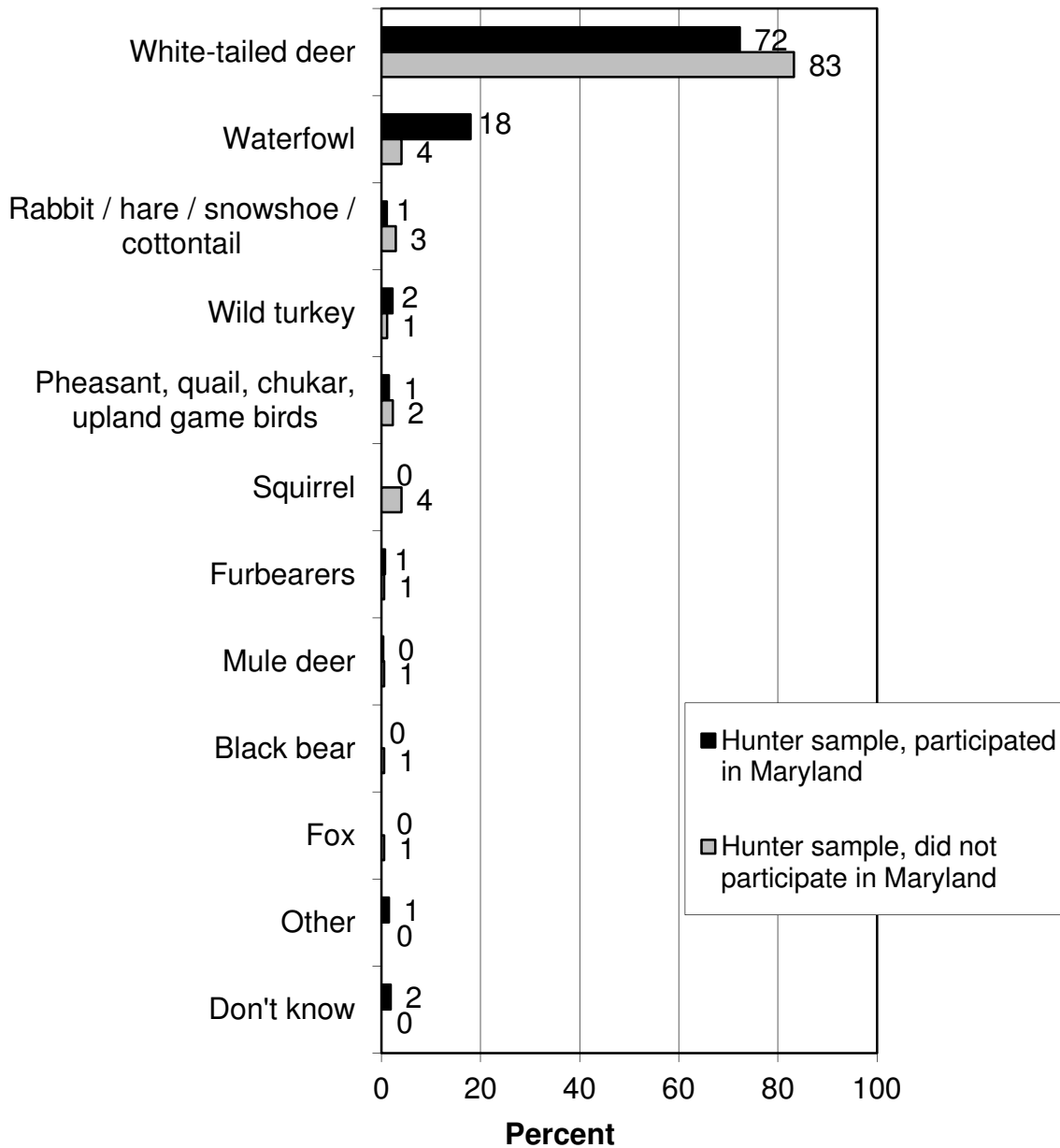
The survey also asked these hunters to name their single most-hunted species in their home state, as shown in the graph on the next page. On this question, 77% of these hunters who hunted in their home state indicated that white-tailed deer is their most-hunted species. This is distantly followed by waterfowl (13%) as the only other species with more than 10% saying it was their

most-sought species. All other species are well below this (rabbit, wild turkey, upland game birds, and squirrel all at 2%). A comparison is also shown of those who hunted in Maryland and those who did not participate in Maryland, which again shows that waterfowl is important to hunters who visit Maryland—even when those hunters are hunting in their home state.

Q58. Which one species do you hunt most often in [STATE OF RESIDENCE]? (Asked of those who hunted in their state of residence in the past 3 years.)

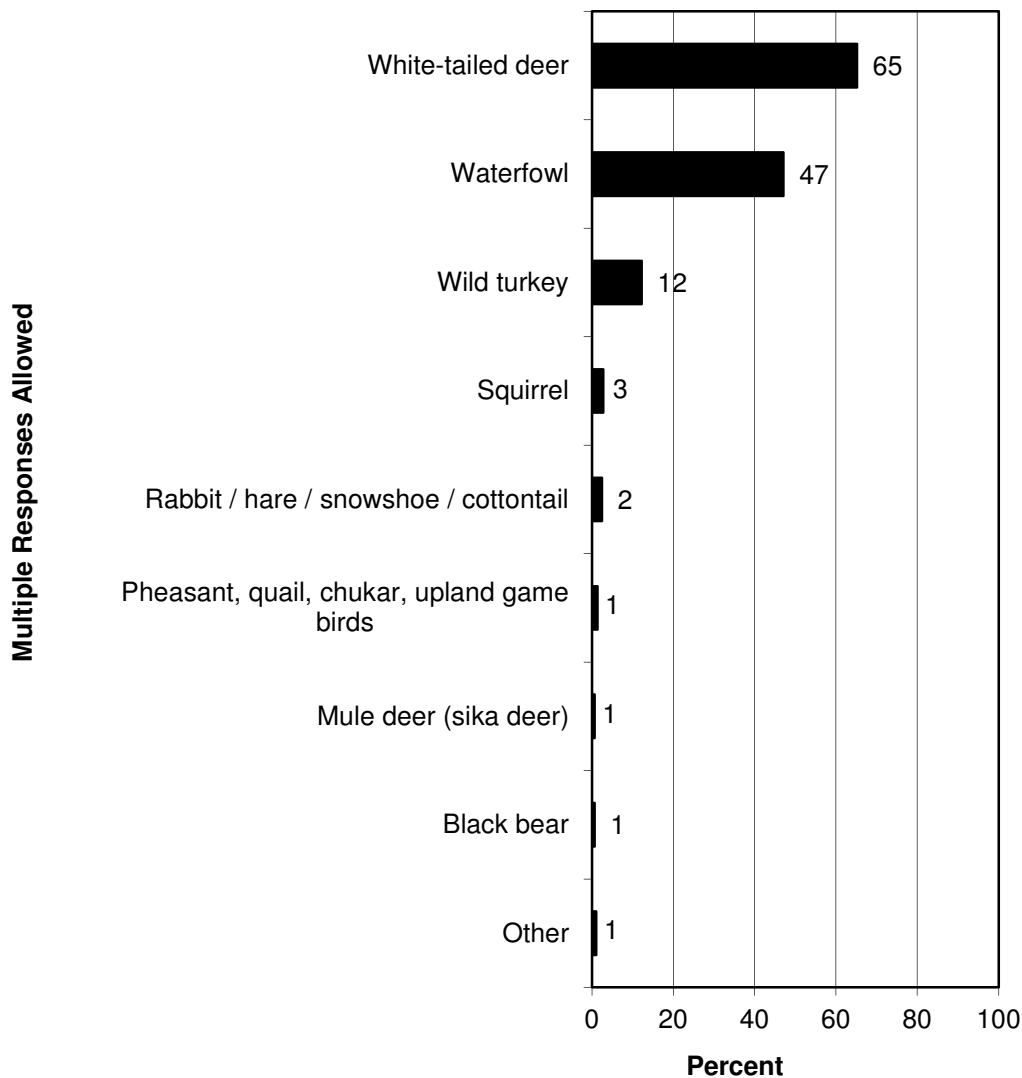


Q58. Which one species do you hunt most often in [STATE OF RESIDENCE]? (Asked of those who hunted in their state of residence in the past 3 years.)

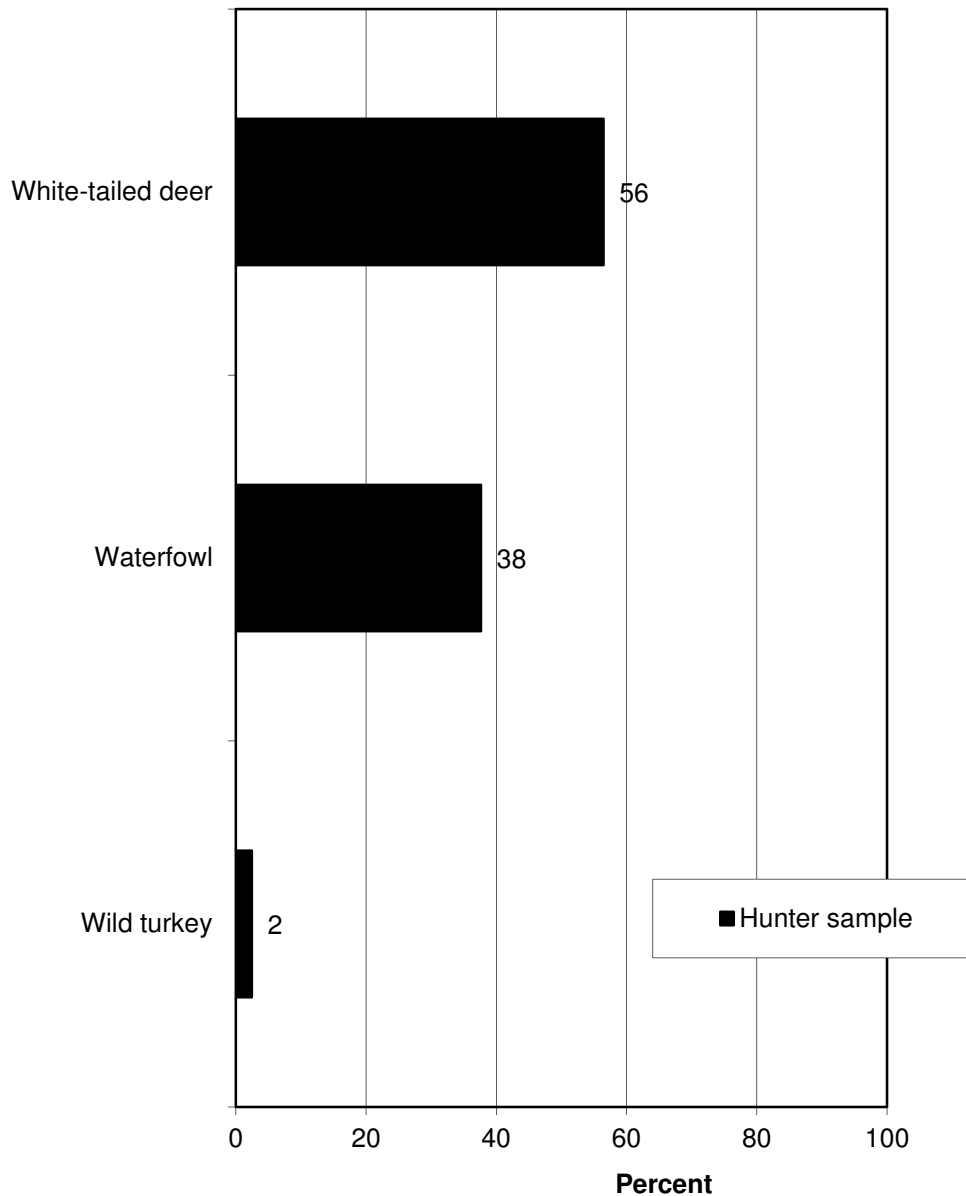


The previous graphs showed the species that hunters hunt in their *home* states. The survey also asked about species hunted *in Maryland*. This shows the importance of white-tailed deer (hunted by 65% of visiting hunters), waterfowl (47%), and wild turkey (12%). Another graph on the following page shows the *single* species hunted most often: 56% say that white-tailed deer is the species they hunt most often. However, waterfowl make up a very important part of the Maryland hunting milieu, as 38% of those visiting Maryland hunters say that waterfowl is the game they most often hunt.

Q145. Which species do you typically hunt in Maryland each year? (Asked of those who traveled to Maryland to hunt in the past 3 years.)



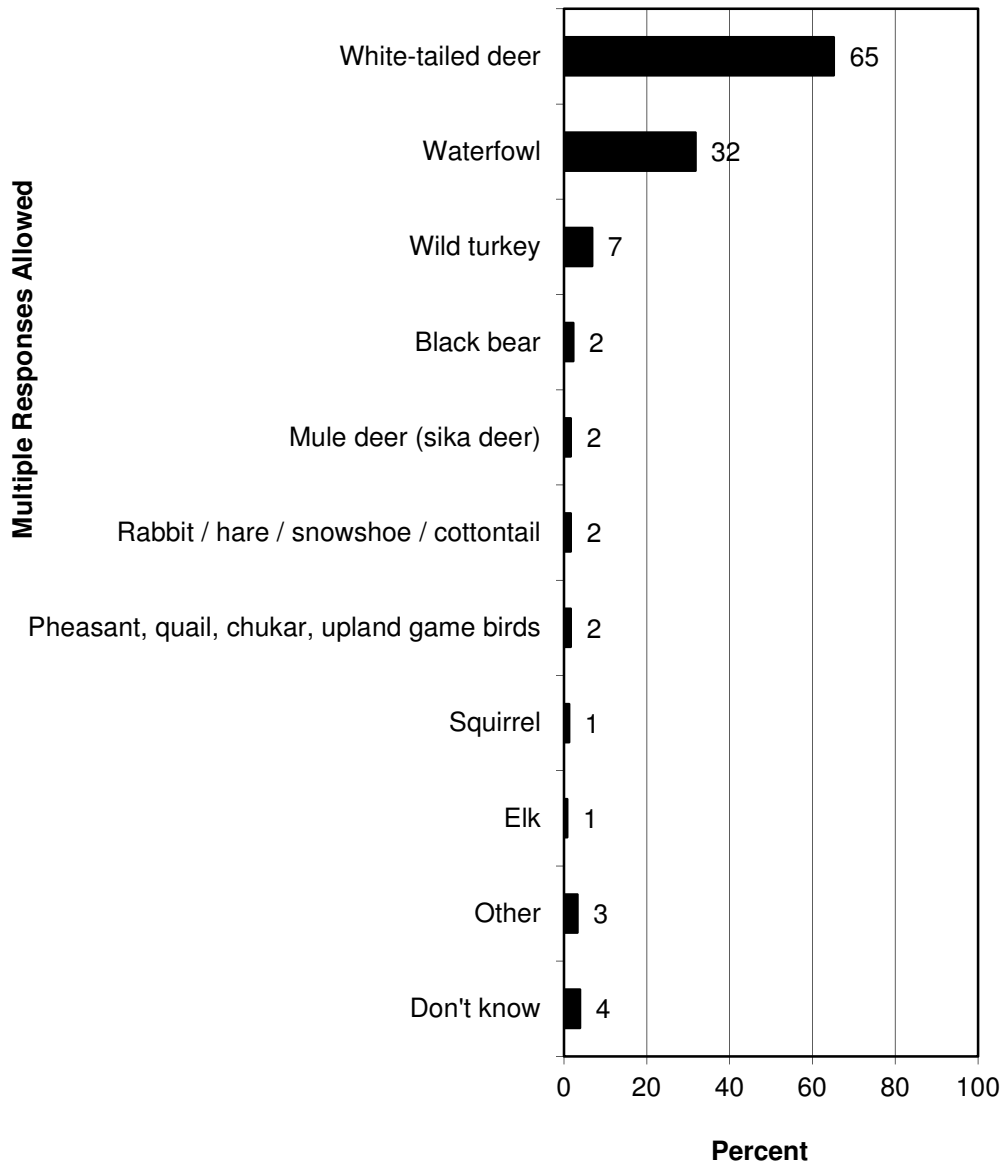
Q147. Which one species do you hunt most often in Maryland? (Asked of those who traveled to Maryland to hunt in the past 3 years.)



A final question about species that hunters hunt asked respondents to name the species that they would be interested in hunting in Maryland, if they were to hunt in Maryland. The results mirror the results of other questions, with white-tailed deer leading the list by far, but with waterfowl being prominent as well. On this question, 65% of all hunters in the survey indicated that they

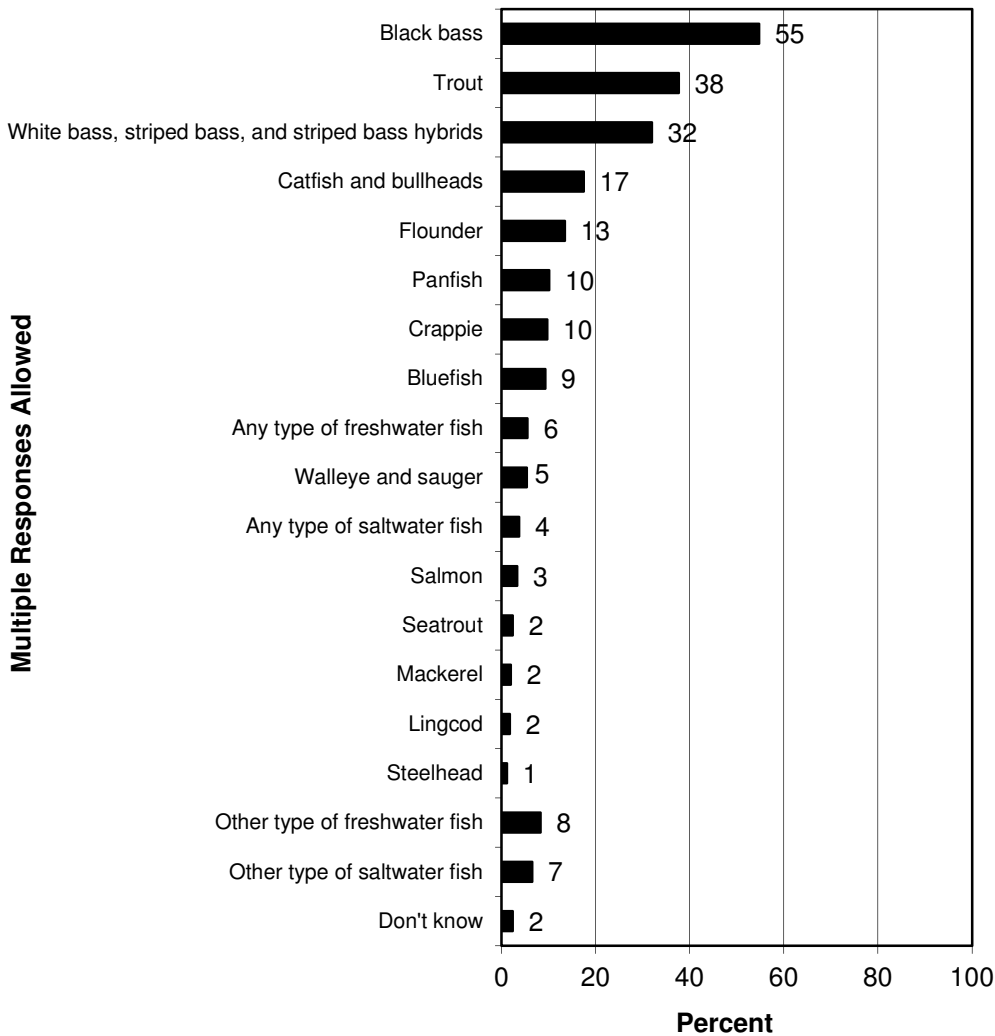
would be interested in hunting white-tailed deer in Maryland, and 32% would be interested in hunting waterfowl. No other species or species group has as much as 10% being interested in it, as wild turkey is third on the list with only 7% being interested in hunting it in Maryland.

Q240. If you were to go hunting in Maryland, which species would you be most interested in hunting? (Asked of the hunter sample.)

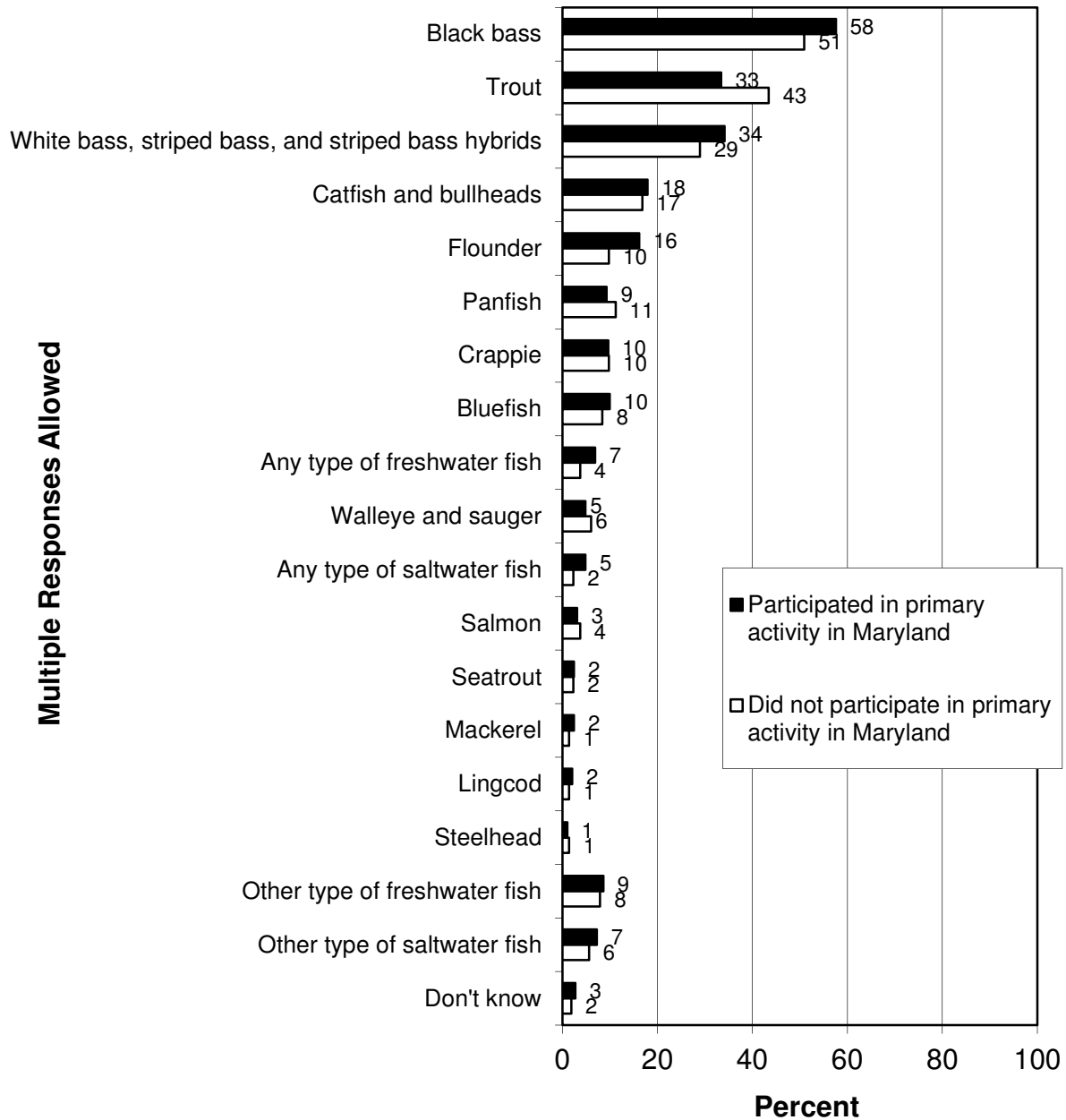


The survey also looked at the species of fish that anglers seek in their home states. Black bass leads the list, with a majority of 55% fishing for black bass. This is followed by trout (38%), white bass/striped bass (32%), and catfish/bullheads (17%). Another graph (following page) shows a comparison of those anglers who visited Maryland to fish and those who did not (although still looking at the species they fish for *in their home states*). That graph shows that those anglers who visit Maryland to fish have a higher percentage fishing for bass (black or white) compared to anglers who do not visit Maryland. It appears, then, that anglers who visit Maryland are much interested in bass to begin with.

Q63. What type of fish do you typically fish for in [STATE OF RESIDENCE] each year? (Asked of those who fished in their state of residence in the past 3 years.)

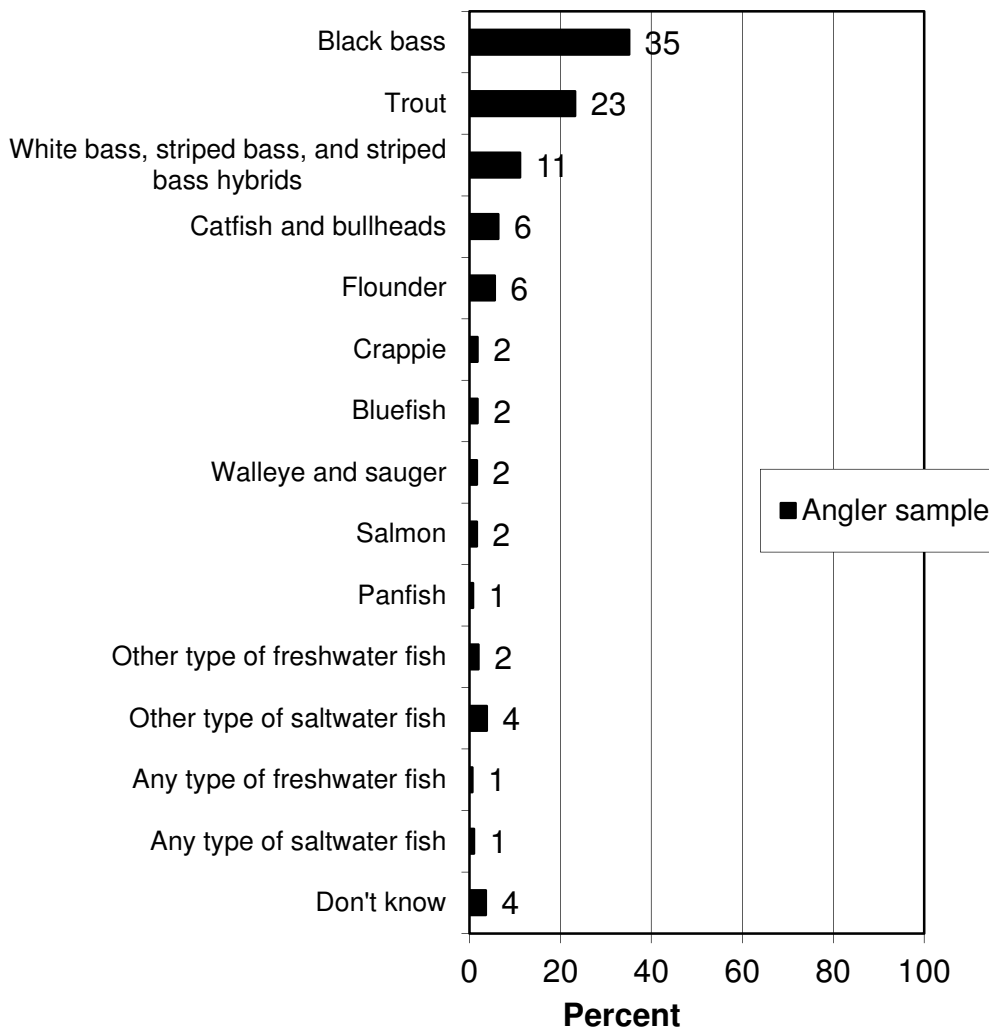


Q63. What type of fish do you typically fish for in [STATE OF RESIDENCE] each year? (Asked of those who fished in their state of residence in the past 3 years.)

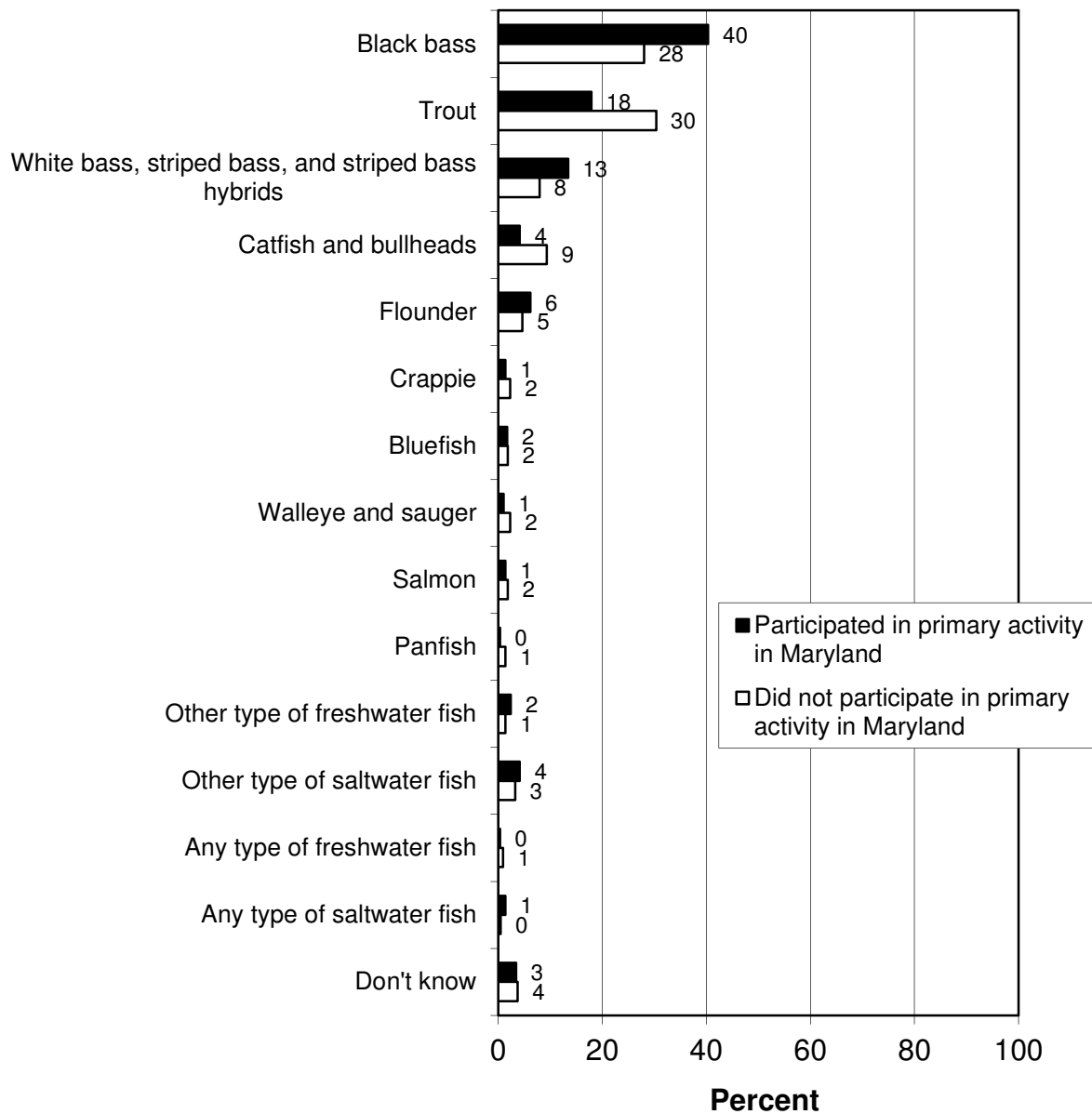


Of worth noting are the species that anglers most often seek in their state of residence: black bass is the most popular among these anglers from the six study states, with 35% of them saying that black bass is the species they most often fish for in their state of residence. Trout is next, with 23% saying it is their most sought species. A second graph breaks this question down by whether the respondent had visited Maryland to fish or not. It shows that the importance of black bass grows, while that of trout shrinks, among those who have come to Maryland to fish (but the question pertains to within their state of residence).

Q69/70. Which one type of fish do you fish for most often in [STATE OF RESIDENCE]? (Asked of those who fished in their state of residence in the past 3 years.)

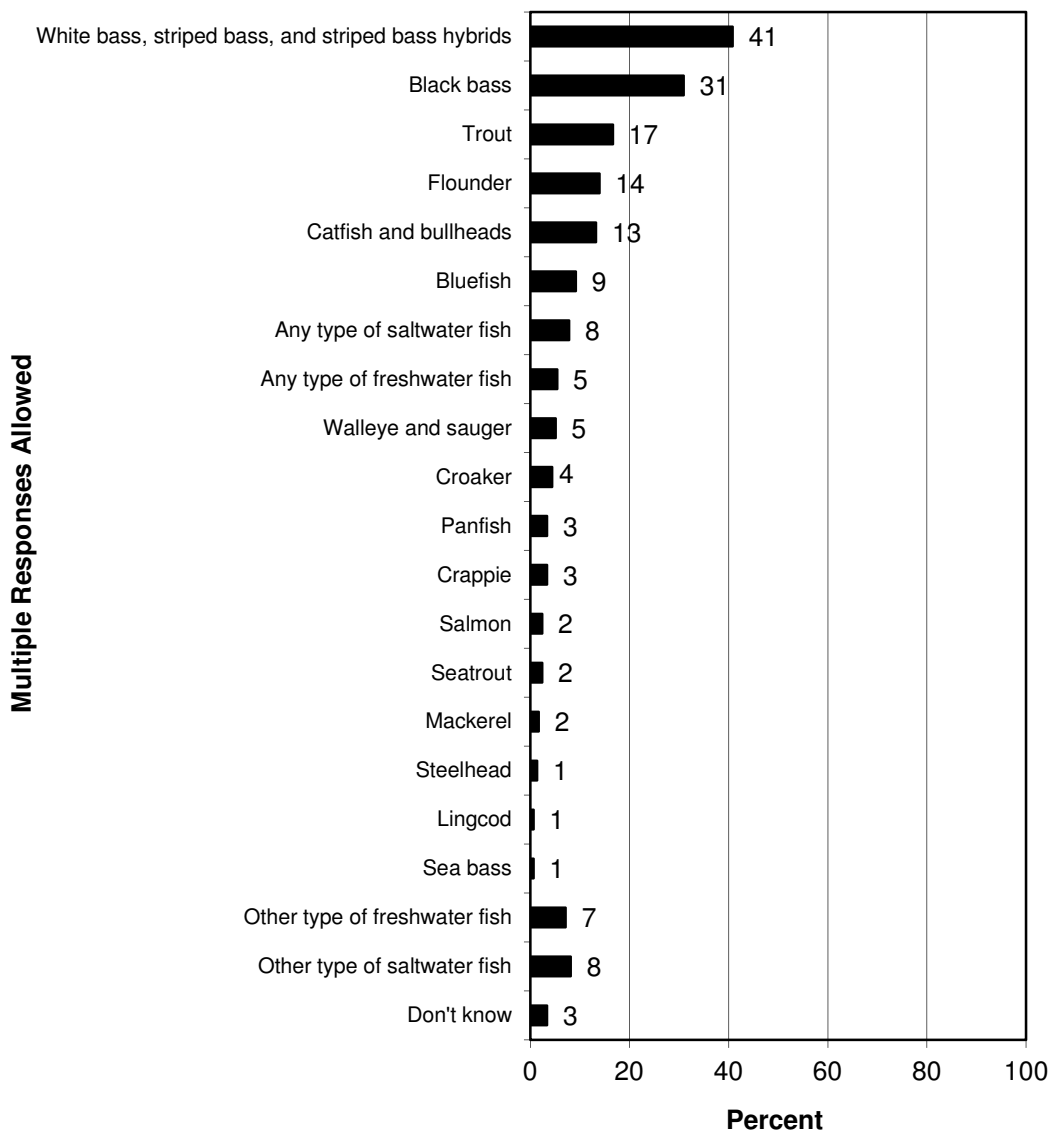


Q69/70. Which one type of fish do you fish for most often in [STATE OF RESIDENCE]? (Asked of those who fished in their state of residence in the past 3 years.)

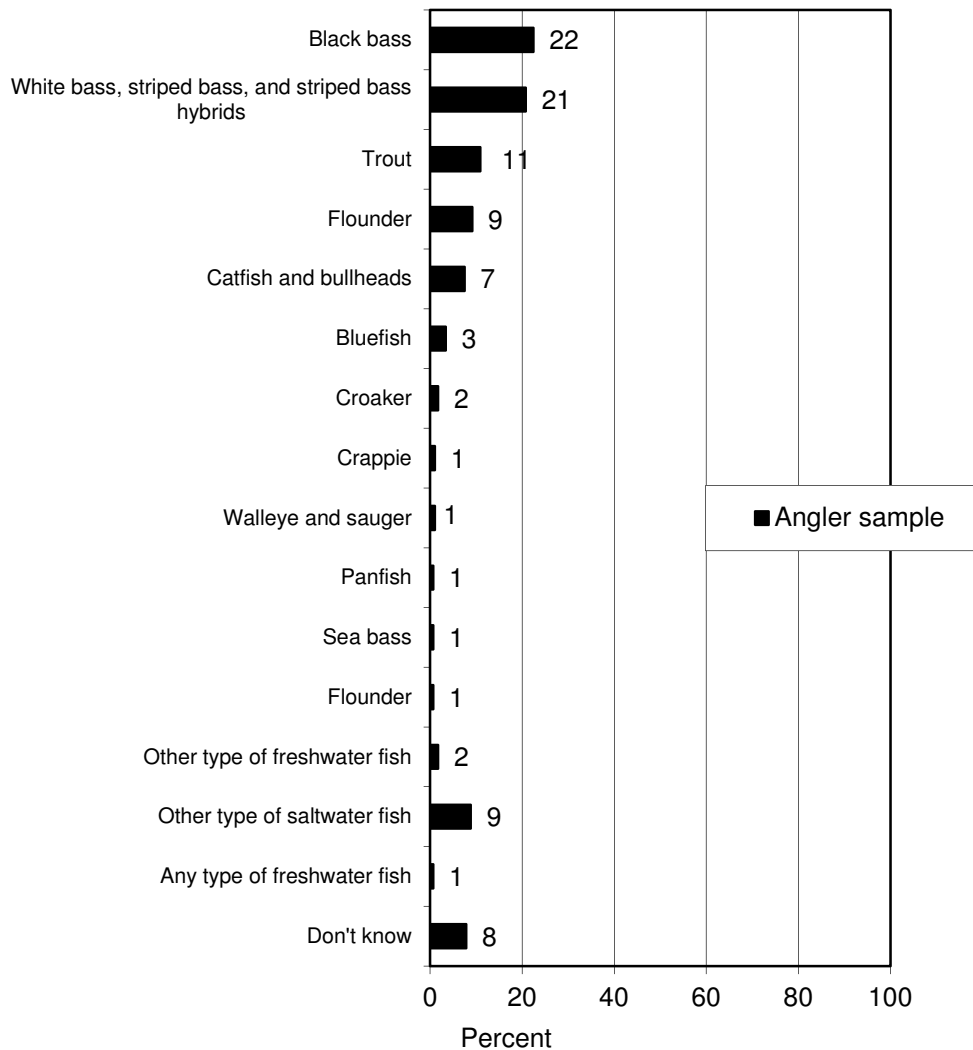


The survey also examined the species of fish that anglers seek *in Maryland*. This shows that 41% of visiting anglers fish for white bass/striped bass, 31% fish for black bass, and 17% fish for trout at least some of the time. Bass is prominent in the single most fished-for species, with 22% of anglers who visited Maryland fishing most often for black bass (largemouth and smallmouth bass), and 21% saying they fished most often for white bass/striped bass (including rockfish). Trout is moderately important, with 11% of visiting anglers seeking trout the most often.

Q152. What type of fish do you typically fish for in Maryland each year? (Asked of those who traveled to Maryland to fish in the past 3 years.)



Q158/159. Which one type of fish do you fish for most often in Maryland? (Asked of those who traveled to Maryland to fish in the past 3 years.)

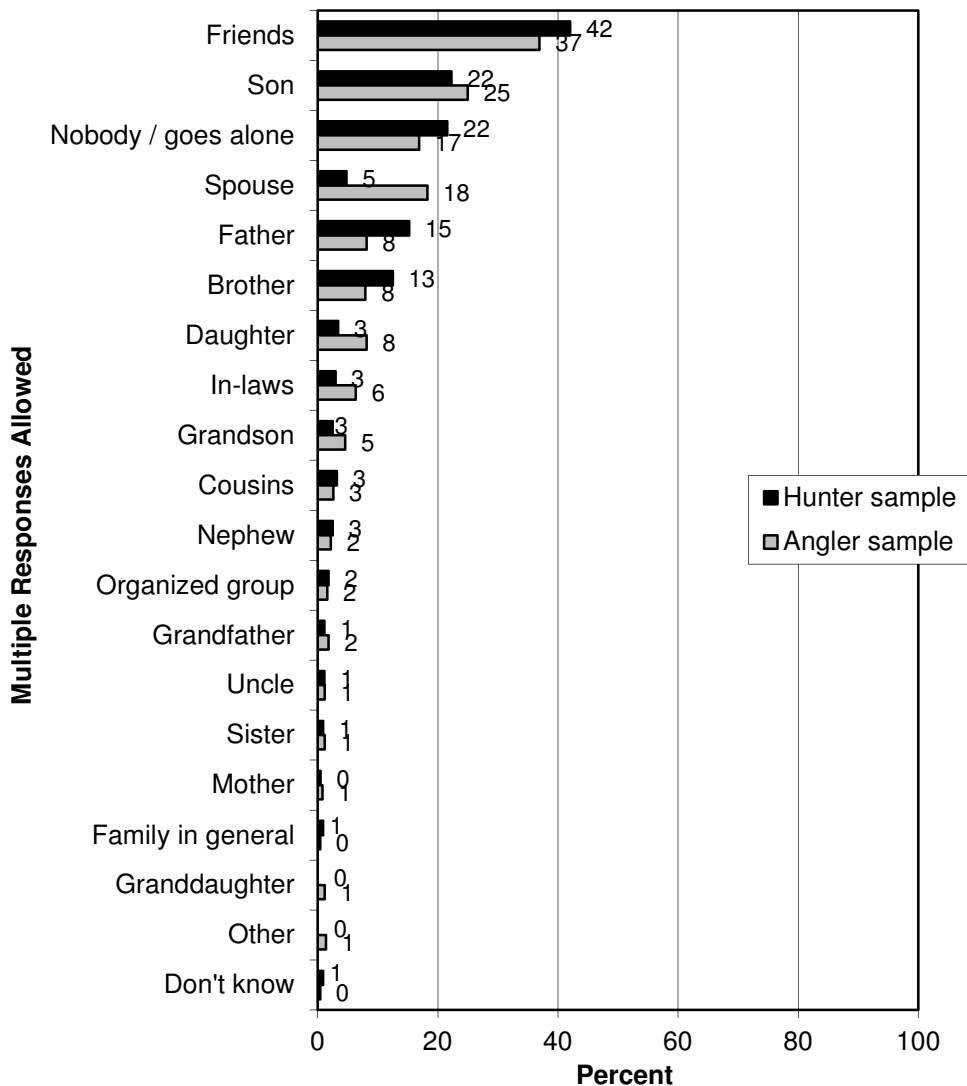


Some results previously discussed pertaining to fishing locations vis-à-vis freshwater or saltwater has obvious implications on species sought and are, therefore, repeated here (without the accompanying graph, which is the section of the report titled, “Location of Hunting and Fishing: Types of Land, Travel Distances”). Question 149 in that section showed that 68% of anglers visiting Maryland fish some of their time in saltwater, and 42% fish saltwater exclusively when they visit Maryland, while 58% fish freshwater some of the time in Maryland, and 32% fish freshwater exclusively.

HUNTING AND FISHING COMPANIONS AND USE OF GUIDES

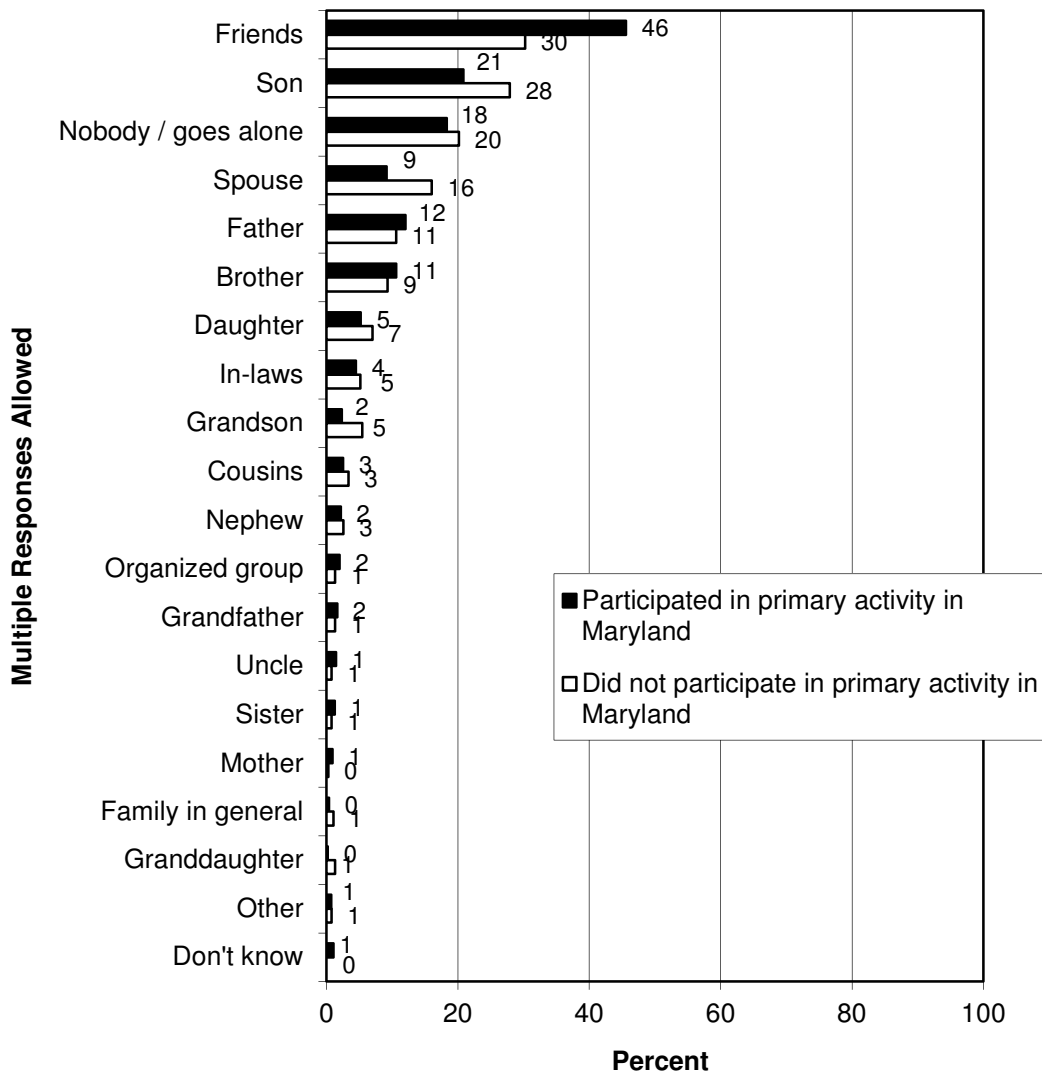
A most basic question simply asked hunters and anglers to say with whom they went hunting and fishing. The question was open-ended, so respondents could say anything that came to mind. Not surprisingly, family predominated: sons are hunting/fishing partners of 22% of hunters and 25% of anglers; spouses are important among anglers (18% of anglers taking spouses along); fathers are important to both hunters and anglers (15% and 8%); and brothers, as well (13% and 8%).

Q75. With whom do you typically [hunt / fish] in [STATE OF RESIDENCE] each year? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



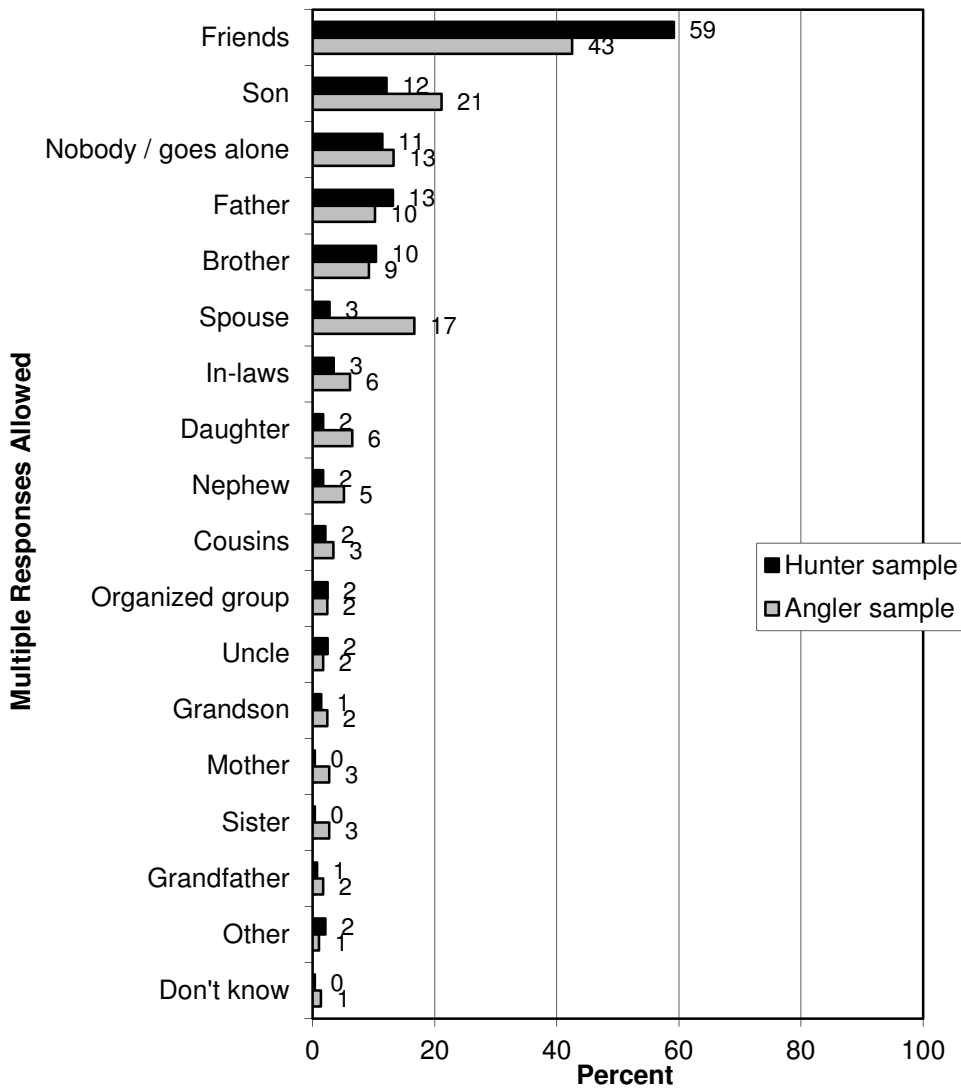
This question was also examined among those who participated in hunting and fishing in Maryland and those who did not. Those who participate in Maryland have a much higher percentage saying that they go hunting/fishing with friends, compared to those who do not participate in Maryland. This suggests a scenario where these hunters and anglers are going hunting and fishing away from family, which, in turn, may make them more mobile in selecting a place to go hunting.

Q75. With whom do you typically [hunt / fish] in [STATE OF RESIDENCE] each year? (Asked of those who [hunted / fished] in their state of residence in the past 3 years.)



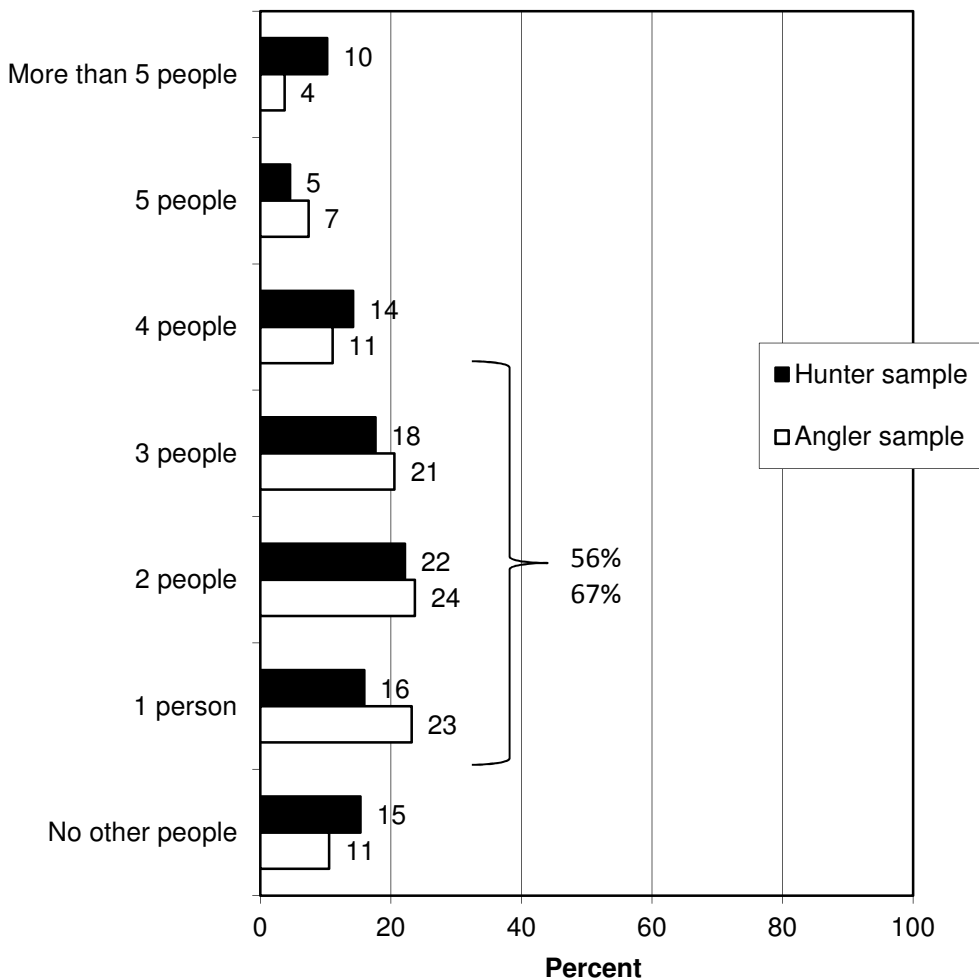
The survey also asked about hunting and fishing companions in Maryland. Among both hunters and anglers, friends grow in importance over their hunting and fishing companions when they participate in their home state. In Maryland, 59% of hunters and 43% of anglers say that they have friends in their hunting/fishing parties, while in their home states, those percentages are 42% and 37%, respectively (see the home state graph of Question 75 previously shown). On the other hand, the percentages saying that they go with their son and saying that they go alone are less when hunting in Maryland than when hunting in their home states.

Q164. With whom do you typically [hunt / fish] in Maryland each year? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years.)



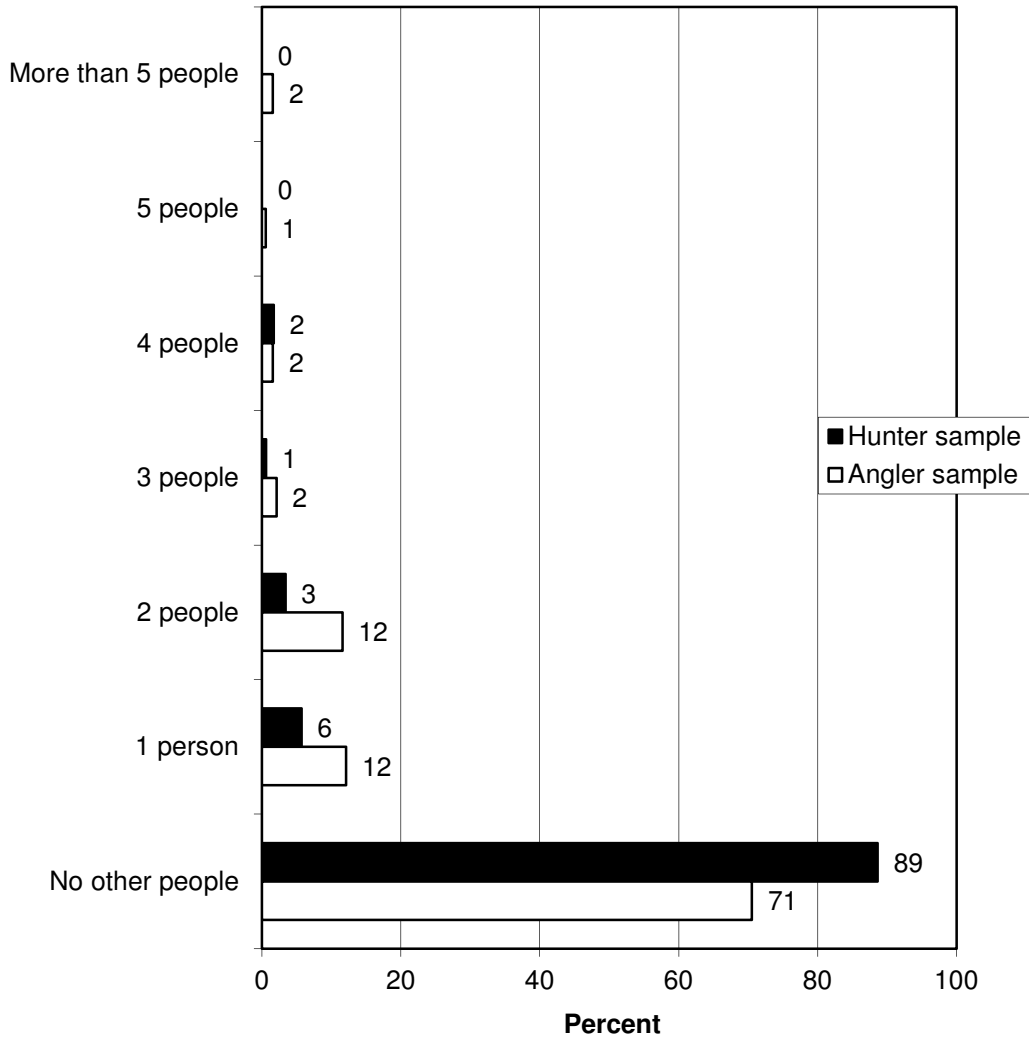
Question 206 asked those who had traveled to Maryland primarily to hunt or fish to indicate the number of hunting and fishing companions. Most commonly, two other people is the number given in response to the question, and a majority of both hunters and anglers had from one to three hunting/fishing companions. However, a smattering, more so among hunters, had large parties of more than five other people (10% of visiting hunters, 5% of visiting anglers).

Q206. How many people typically travel with you to [hunt / fish] on a [hunting / fishing] trip to Maryland? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years.)



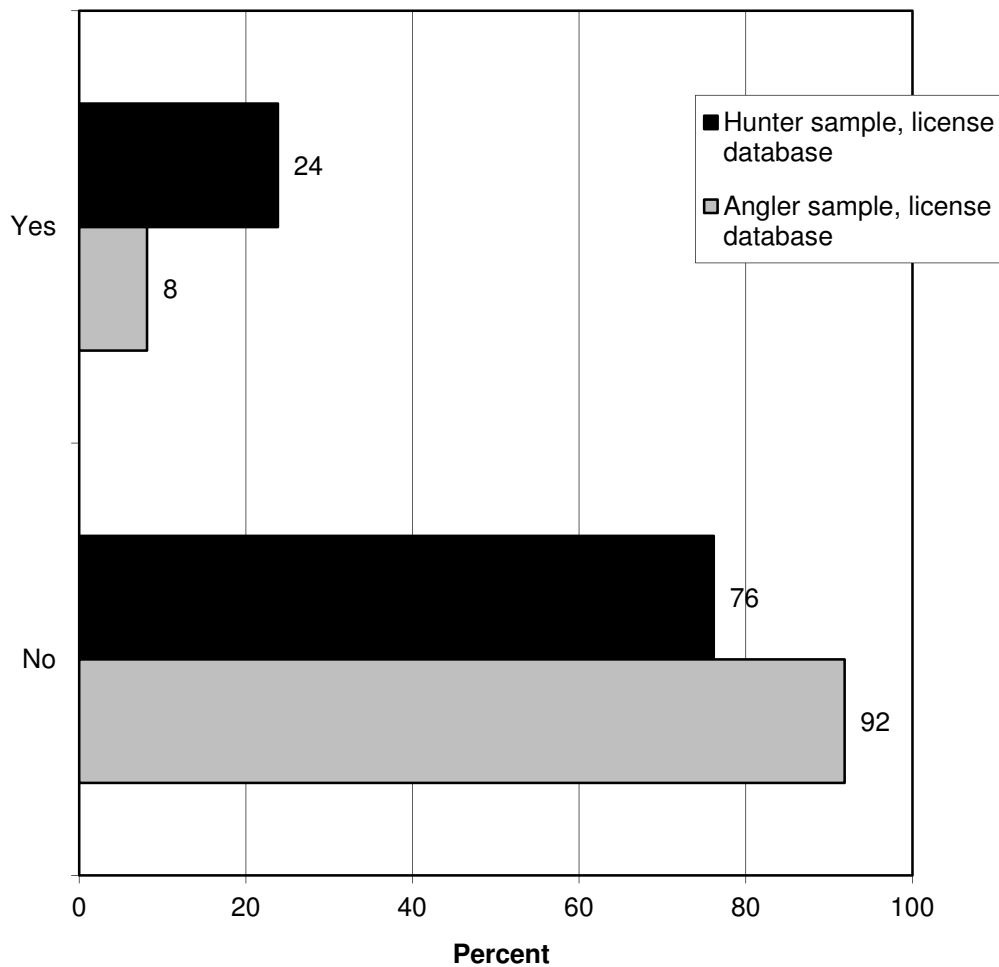
The results of Question 207 in follow-up to the above question found that only 11% of hunters said that they had non-hunters along on their hunting trip. Among anglers, this is a bit more common, with 29% of anglers saying that non-anglers came along on the fishing trips.

Q207. How many people typically travel with you on a [hunting / fishing] trip to Maryland who do not [hunt / fish] on the trip? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years.)



A final type of companion is a paid hunting or fishing guide, an integral part of nonresident hunting in Maryland. In looking at nonresidents Maryland license holders, nearly a quarter of out-of-state hunters in Maryland use a guide (24% do so). Among anglers, a lower percentage use a guide (8%), but this still represents a substantial number of anglers, as one out of every dozen or so nonresident anglers use a guide in Maryland.

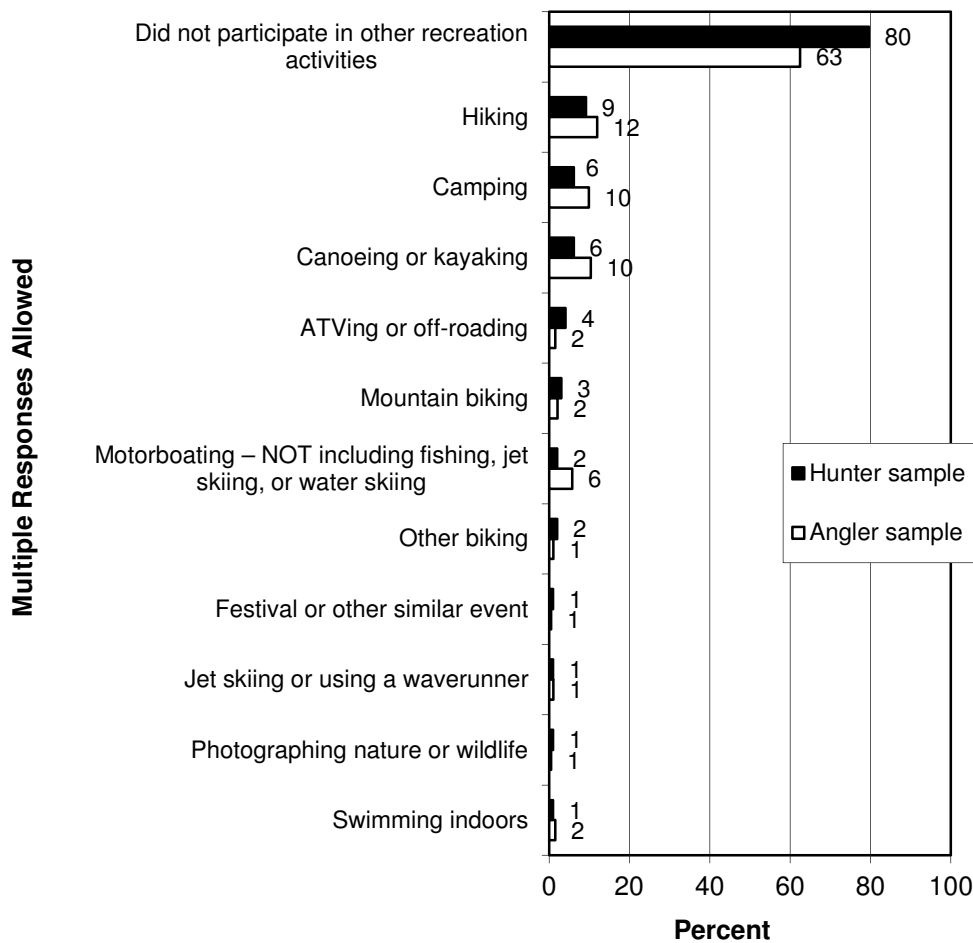
Q205. Do you typically use a guide for your [hunting / fishing] trips to Maryland? (Asked of those who traveled to Maryland to [hunt / fish] as the main reason for visiting Maryland in the past 3 years.)



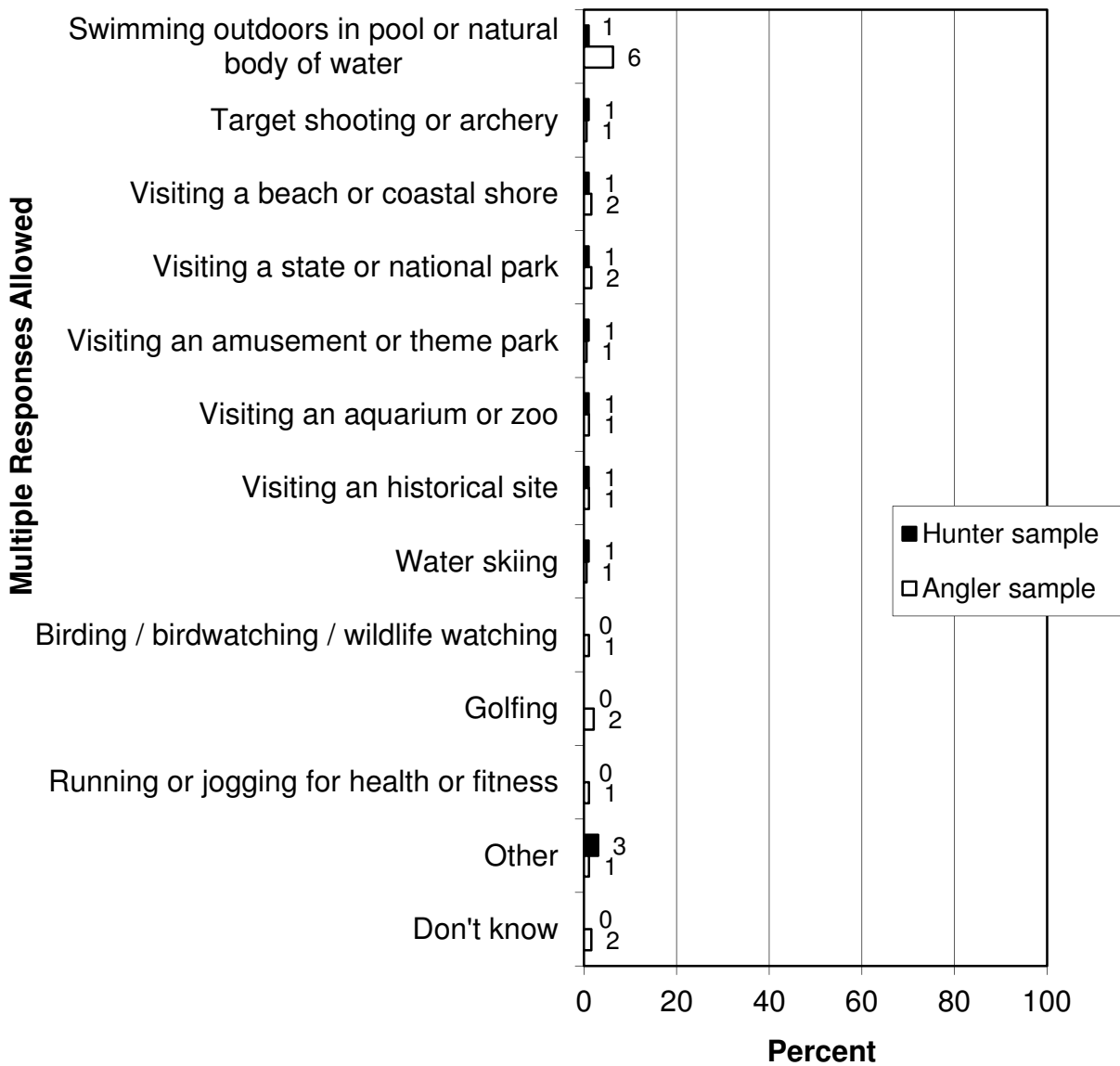
PARTICIPATION IN OTHER RECREATION

Those who had traveled out of their home state to hunt or fish but did not travel to Maryland to do so were asked to name any other outdoor recreational activities that they had done in that other state during their hunting/fishing trips. The overwhelming majority of hunters and anglers indicated doing no other outdoor recreational activities. Nonetheless, some had done some other activities, with three activities being the most common: hiking, camping, and canoeing/kayaking. Among hunters, ATVing is also a common activity, and among anglers, motorboating is a common activity. (The list of activities done by at least 1% of either group is long, so the results are shown on two graphs.)

Q111. What other activities did you do in the past 3 years in that other state while hunting and fishing?
(Asked of those who traveled to another state to [hunt / fish], but did not travel to Maryland to do so.)
(Part 1 of 2)

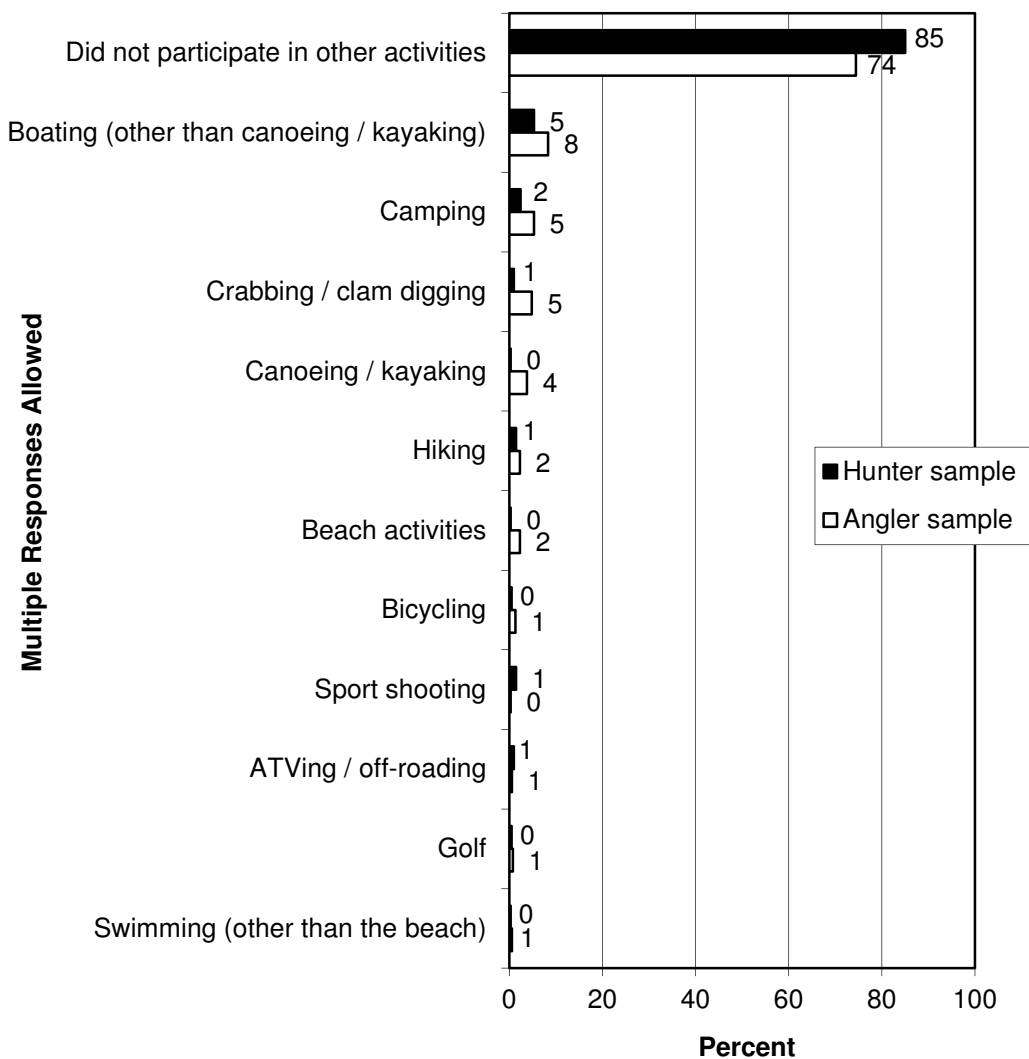


**Q111. What other activities did you do in the past 3 years in that other state while hunting and fishing? (Asked of those who traveled to another state to [hunt / fish], but did not travel to Maryland to do so.)
(Part 2 of 2)**



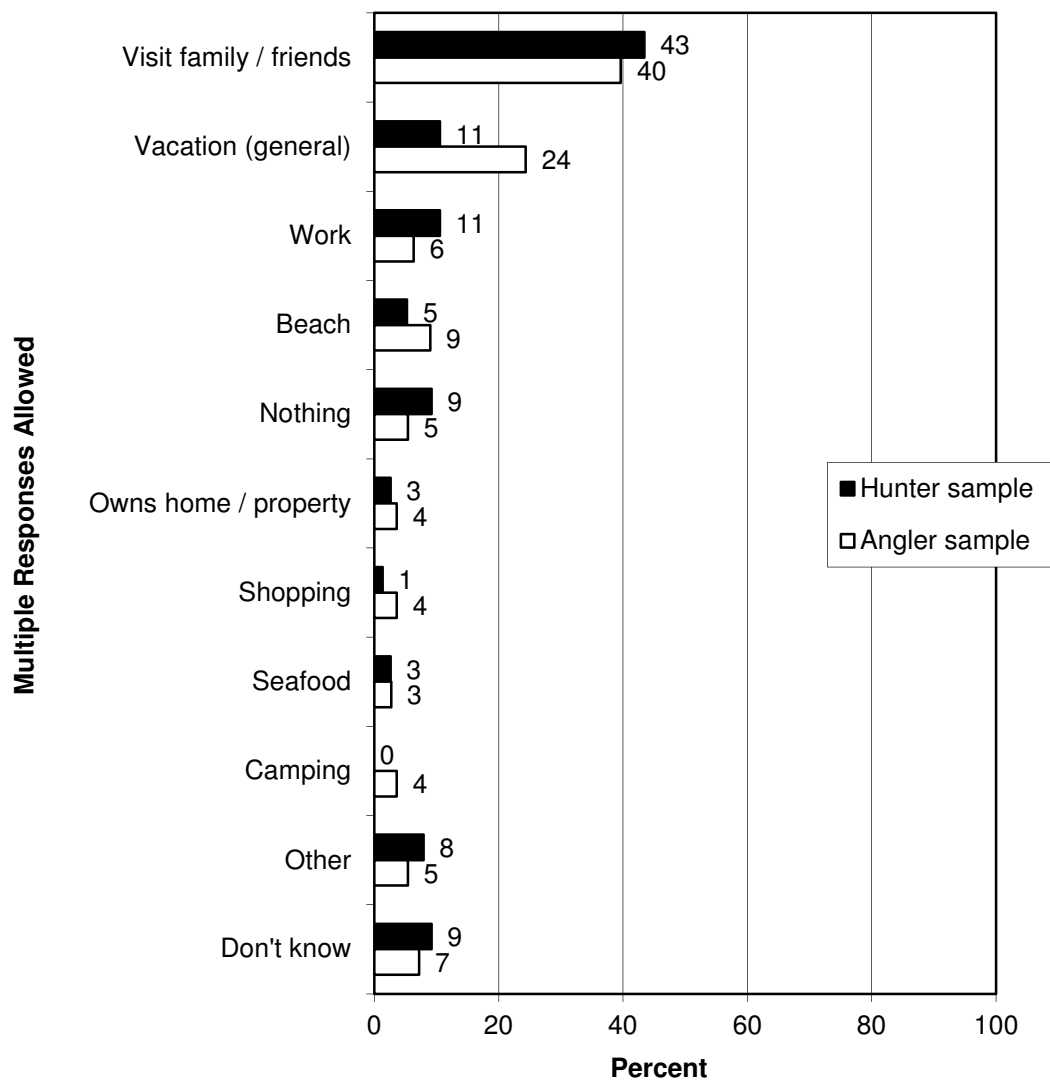
Those hunters and anglers who had traveled to Maryland to hunt and fish were asked about other recreational activities they may have done while on those hunting or fishing trips. Other common activities include boating (other than canoeing or kayaking), camping, and crabbing or clam digging.

Q138. What were the other recreational activities that you did in Maryland while on your [hunting / fishing] trips? (Asked of those who had hunted or fished in Maryland in the past 3 years and who did other recreational activities on the same trip to hunt and/or fish.)



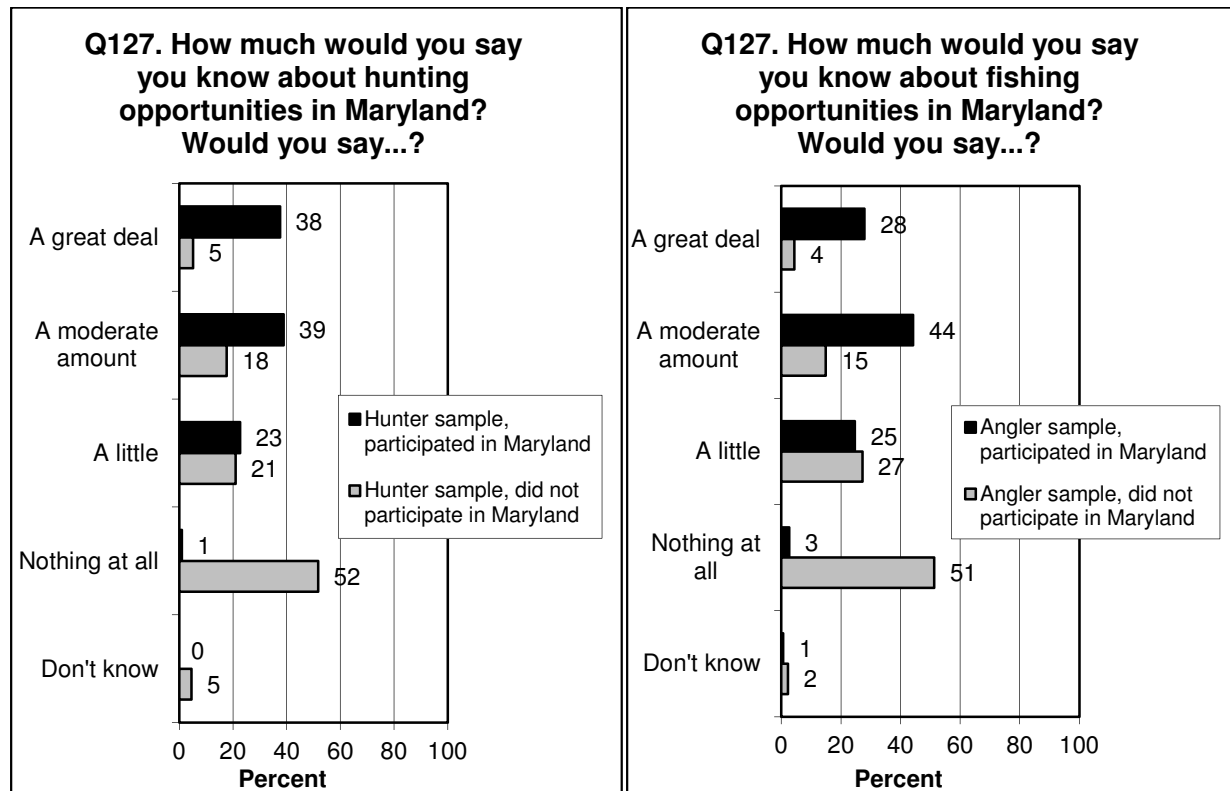
The graph below shows the main reasons for visiting Maryland among those hunters and anglers who visited Maryland at least once when hunting and fishing was not their main reason for the visit. Visiting family and friends is a prominent reason, as is vacationing (including beach visits).

Q226. What is typically your main reason for visiting Maryland when [hunting / fishing] is not your main reason for going? (Asked of those who traveled to Maryland to [hunt / fish] in the past 3 years and who had at least one trip in which [hunting / fishing] was not the primary reason for visiting Maryland.)



AWARENESS AND KNOWLEDGE OF HUNTING AND FISHING IN MARYLAND

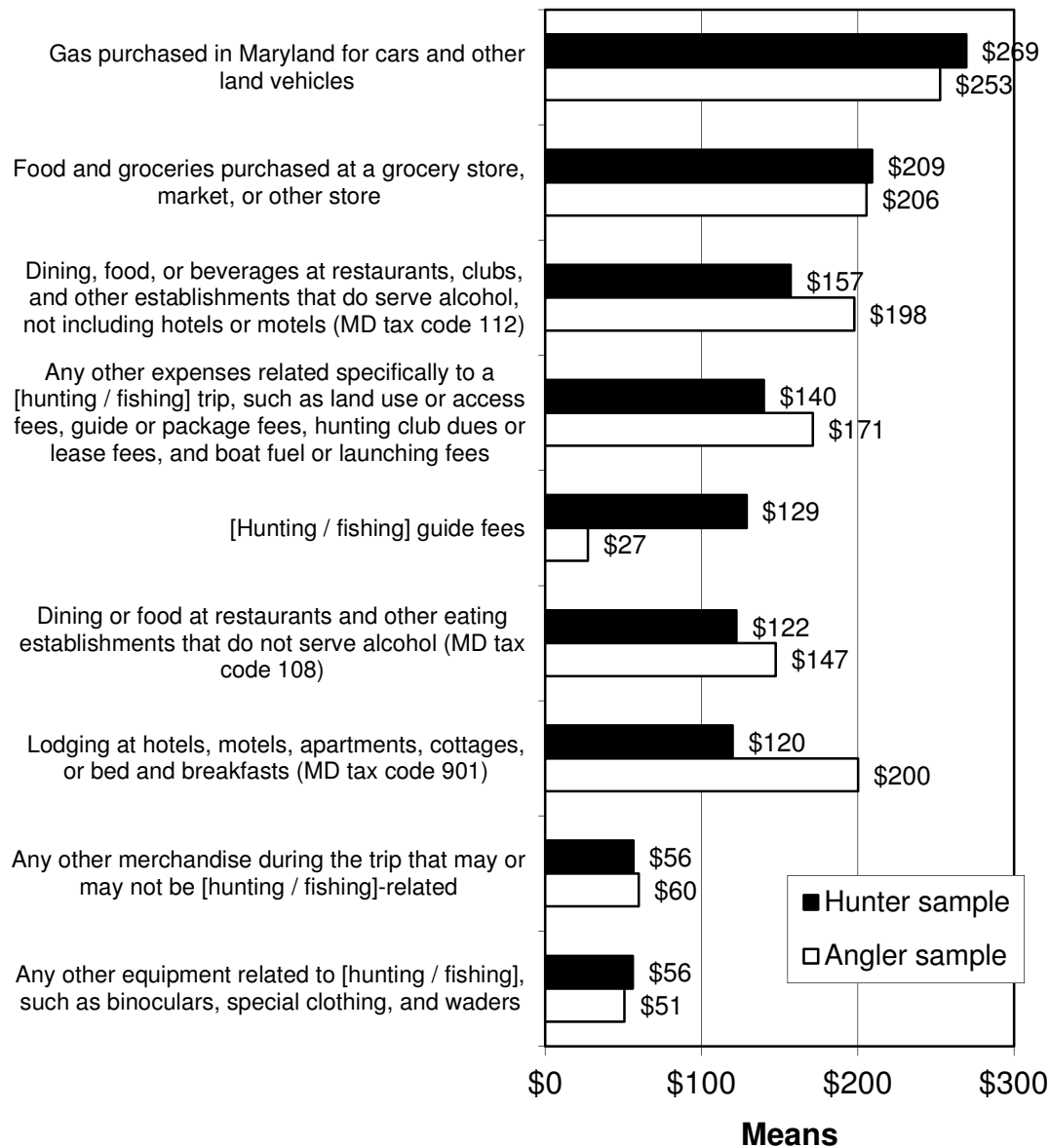
The survey asked hunters and anglers to indicate how much they know about hunting and fishing opportunities in Maryland. Obviously, those who have participated in Maryland have fairly robust knowledge. However, among hunters who have *not* participated in Maryland, the majority (52%) say that they know nothing at all about hunting opportunities in Maryland. Among anglers who have *not* participated in Maryland, 51% say that they know nothing at all about fishing opportunities in Maryland.



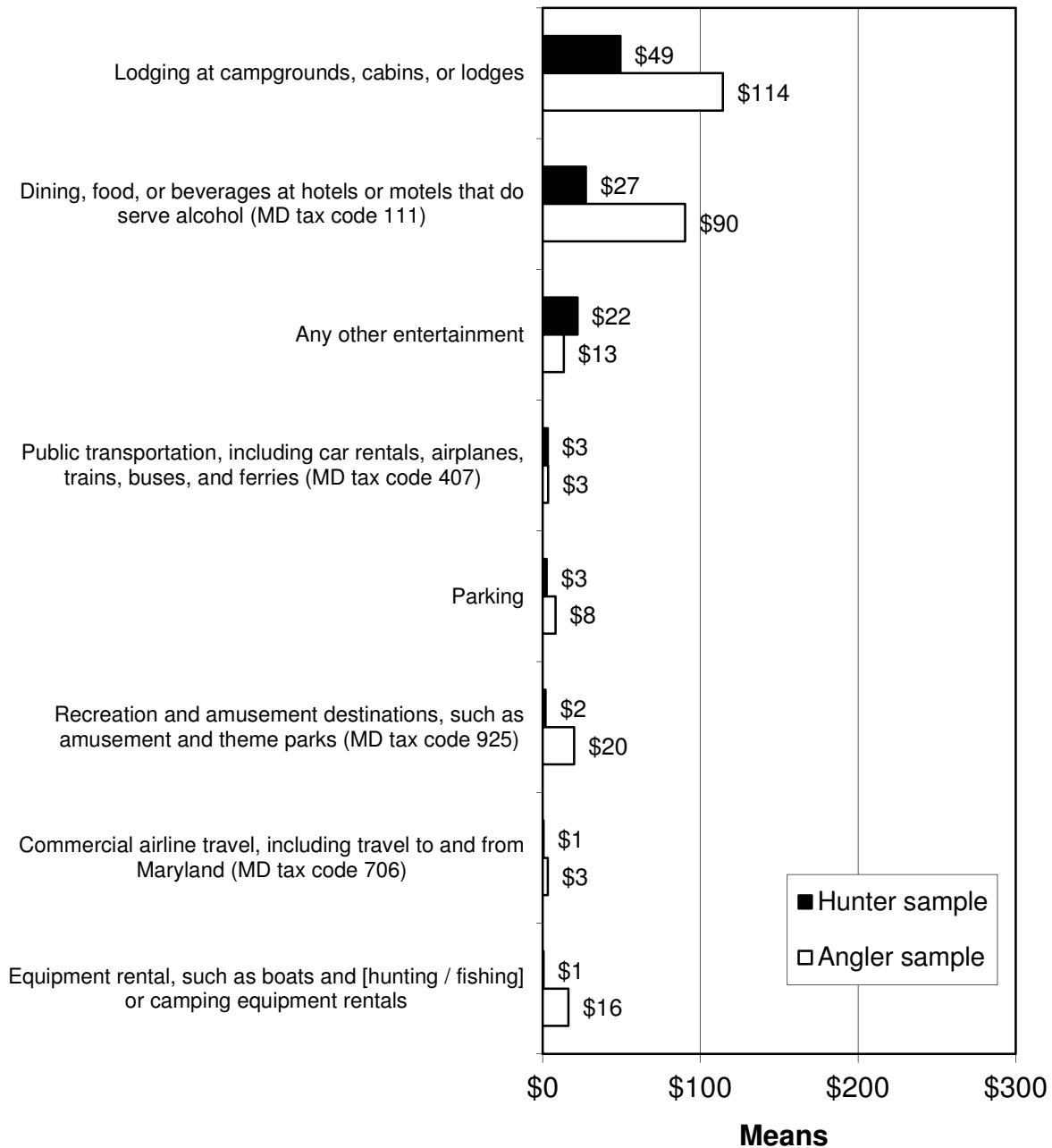
EXPENDITURES ON HUNTING AND FISHING IN MARYLAND

The expenditure data are shown on two graphs for legibility. Gasoline for cars and land vehicles (i.e., excluding boats) is the leading item, followed by food/groceries and restaurant dining. Note that the Maryland tax codes for various categories are shown.

Q272-295. How much did you personally spend on the following while [hunting / fishing] in Maryland during the 2013-2014 season? (Part 1)



Q272-295. How much did you personally spend on the following while [hunting / fishing] in Maryland during the 2013-2014 season? (Part 2)



In addition to the mean expenditures for the various categories, the analysis looked at the total expenditures for items with various tax codes. These are tabulated as follows, with tax codes

112 and 901 having the highest total expenditures (more than \$2 million for each tax code among hunters, and more than \$10 million for each code among anglers). These total expenditures are based on the total annual license holders and the percentage of license holders who are estimated to hunt in any given year, shown in the second tabulation.

Tax code	Expenditure item	Hunters	Anglers
112	Dining, food, or beverages at restaurants, clubs, and other establishments that do serve alcohol, not including hotels or motels	\$2,868,948	\$10,661,451
901	Lodging at hotels, motels, apartments, cottages, or bed and breakfasts	\$2,190,283	\$10,789,882
108	Dining or food at restaurants and other eating establishments that do not serve alcohol	\$2,234,386	\$7,945,105
111	Dining, food, or beverages at hotels or motels that do serve alcohol	\$499,941	\$4,870,590
925	Recreation and amusement destinations, such as amusement and theme parks	\$34,043	\$1,069,349
407	Public transportation, including car rentals, airplanes, trains, buses, and ferries	\$57,460	\$186,751
706	Commercial airline travel, including travel to and from Maryland	\$9,284	\$170,455

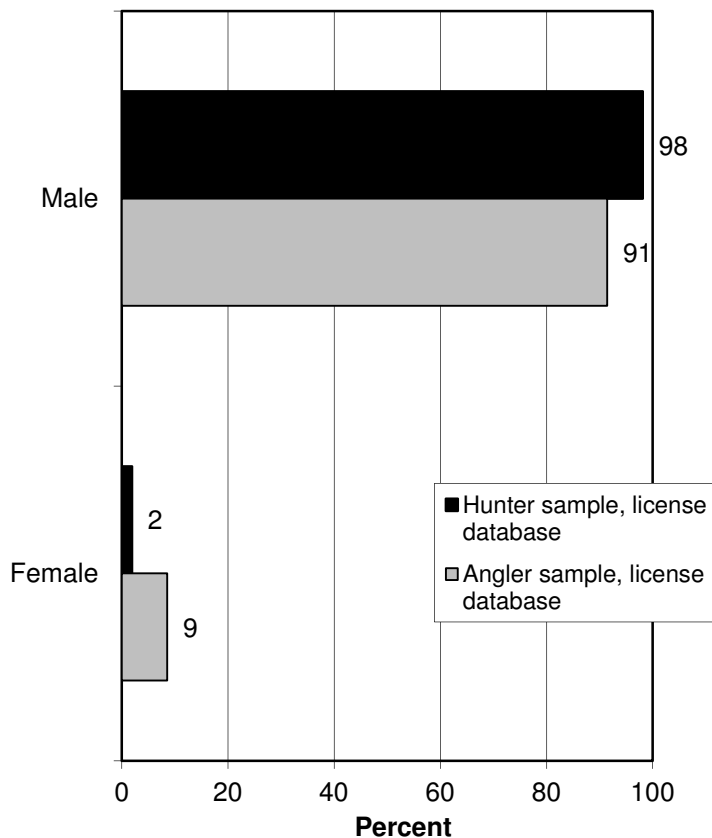
	Total licenses	Total participants
Anglers	63,756	53,904
Hunters	20,220	53,904

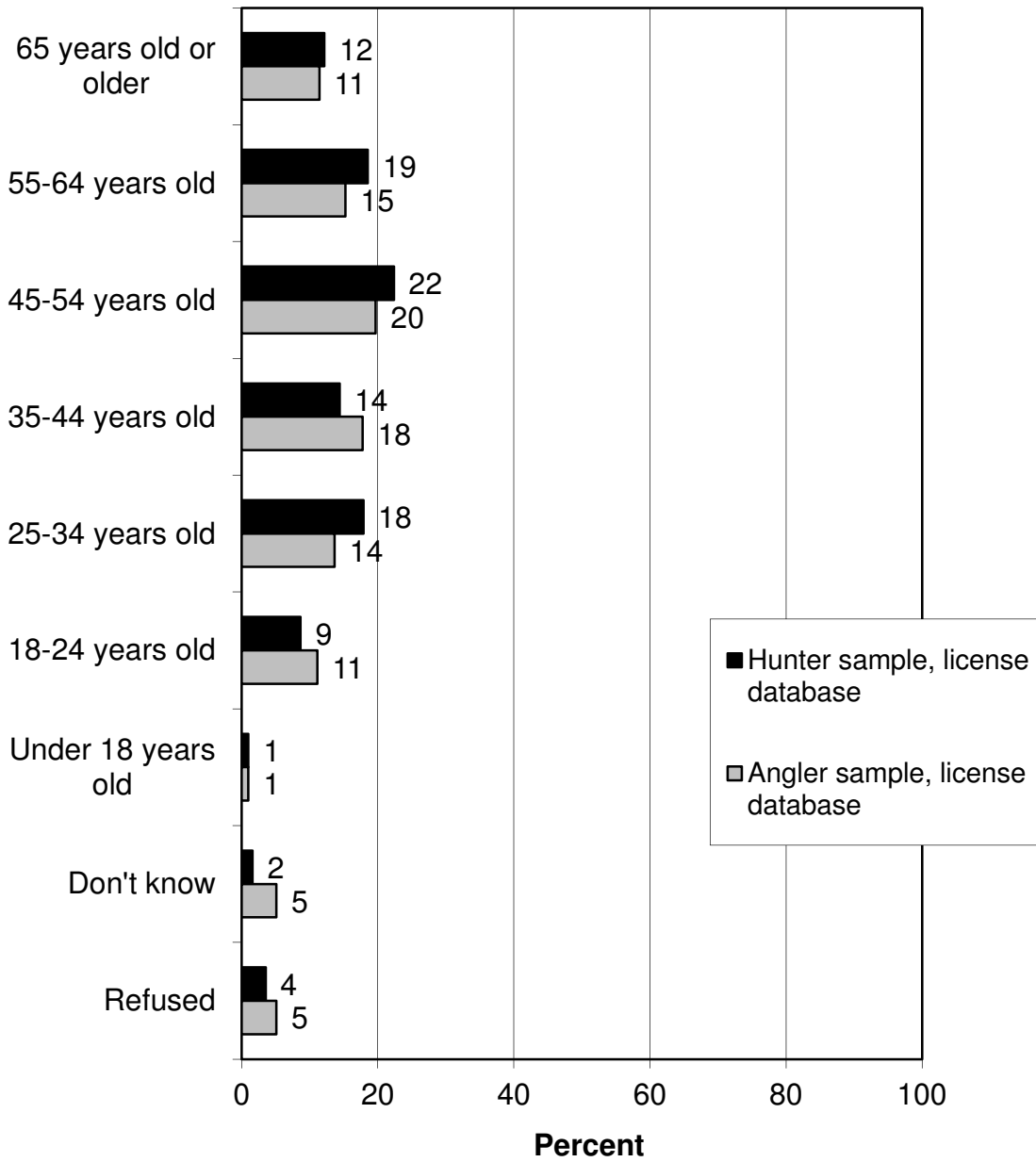
DEMOGRAPHIC DATA

The following demographic data are shown: gender, age, household income, ethnic background, number of people and number of youth living in the household, whether the residence is in a rural or urban area, and where they live in those other six states of interest (Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia).

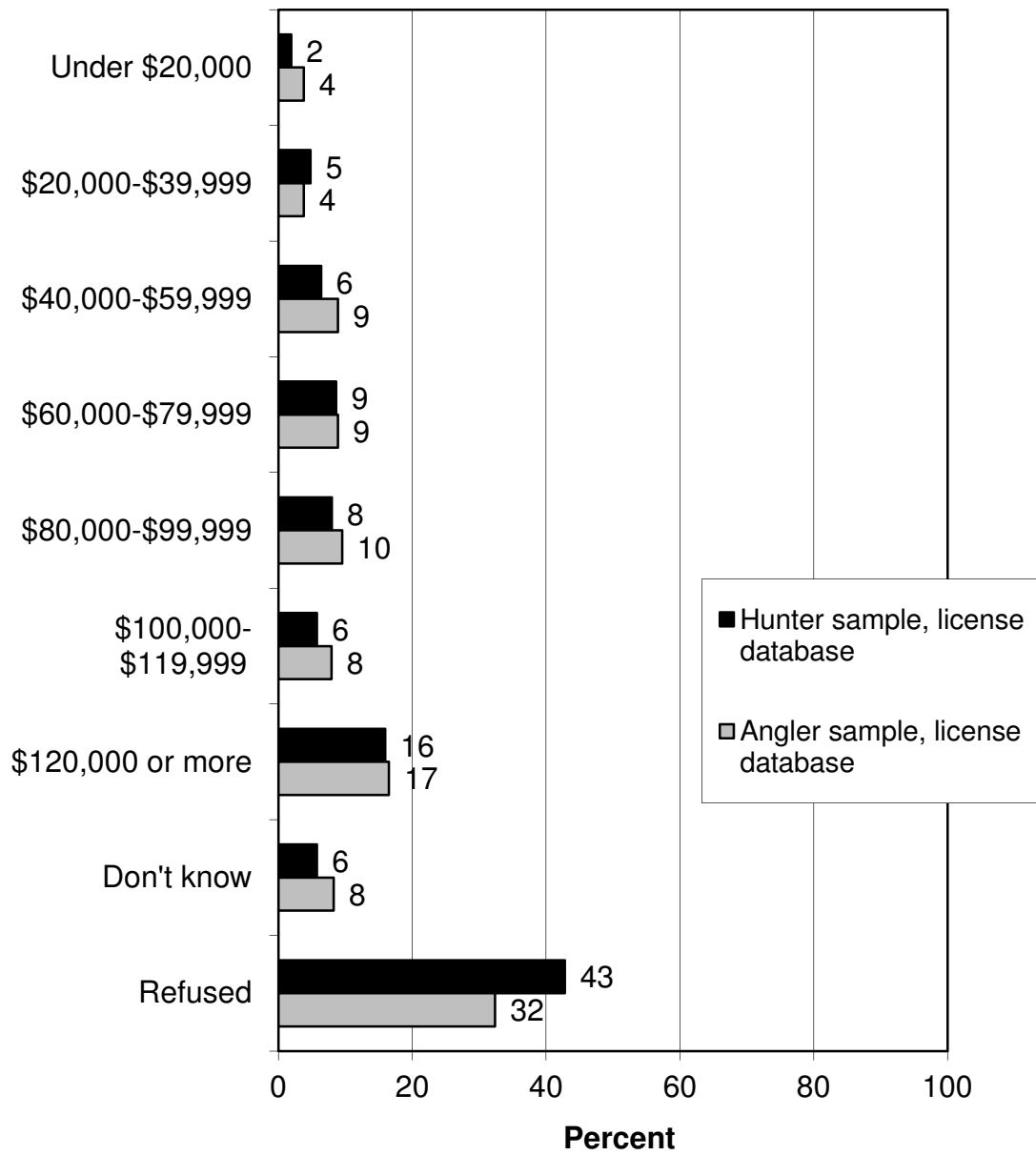
As indicated in the methodology, one sample in the survey was Maryland nonresident license holders, and this survey gives a snapshot of exactly who those people are. For instance, they are composed overwhelmingly of males (98% of hunters, 91% of anglers), are mostly middle aged (both have a peak in the 45 to 54 years old range), are composed mostly of whites, are without youth in the household (76% of hunters and 67% of anglers have no youth in their home), and have small households (a majority of both hunters and anglers have a 2-person or 1-person household). These are the demographic characteristics of Maryland nonresident license holders from among Delaware, New Jersey, New York, Pennsylvania, Virginia, and West Virginia.

Q325. Respondent's gender (not asked; observed by interviewer).

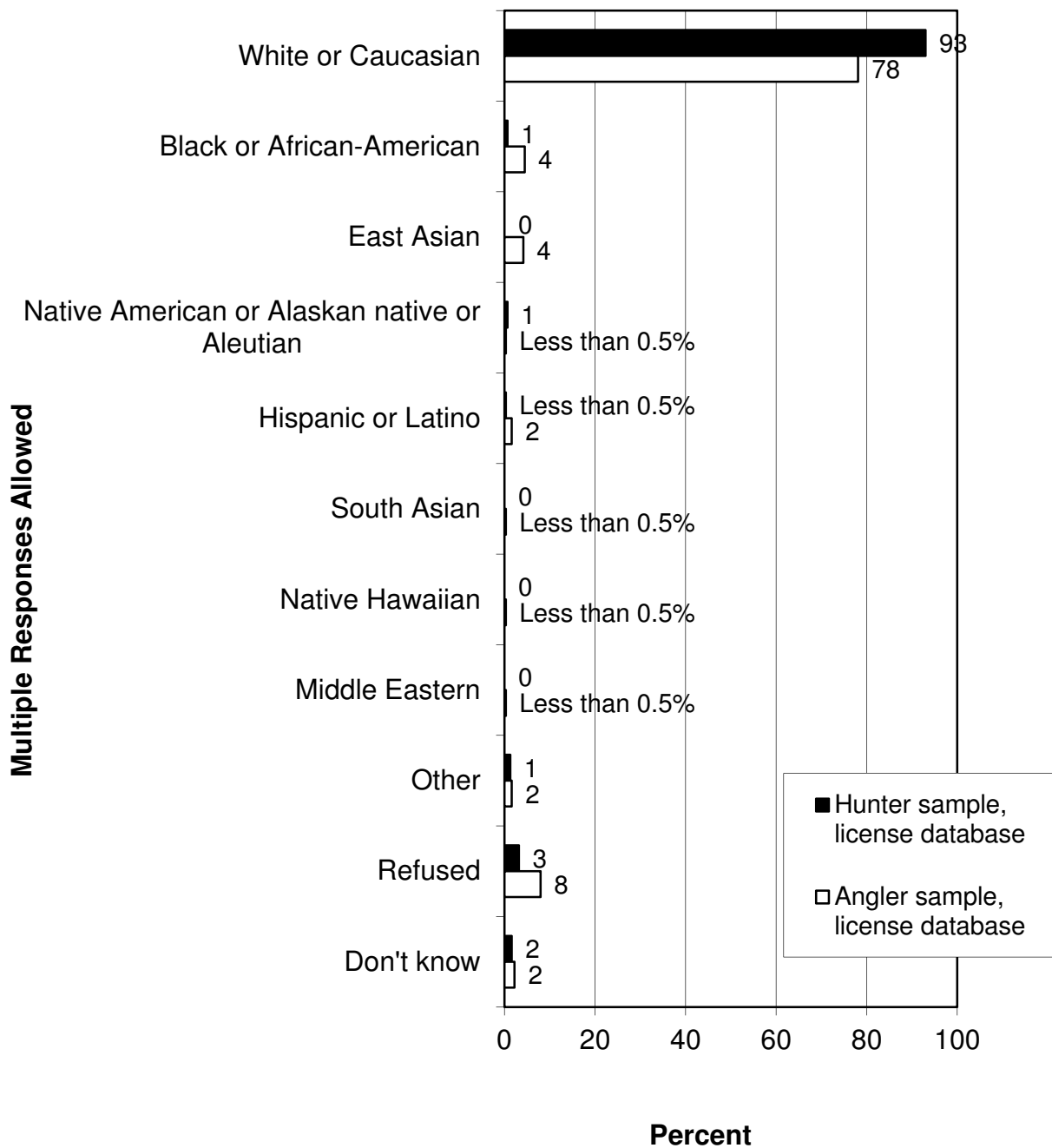


Q319. Respondent's age.

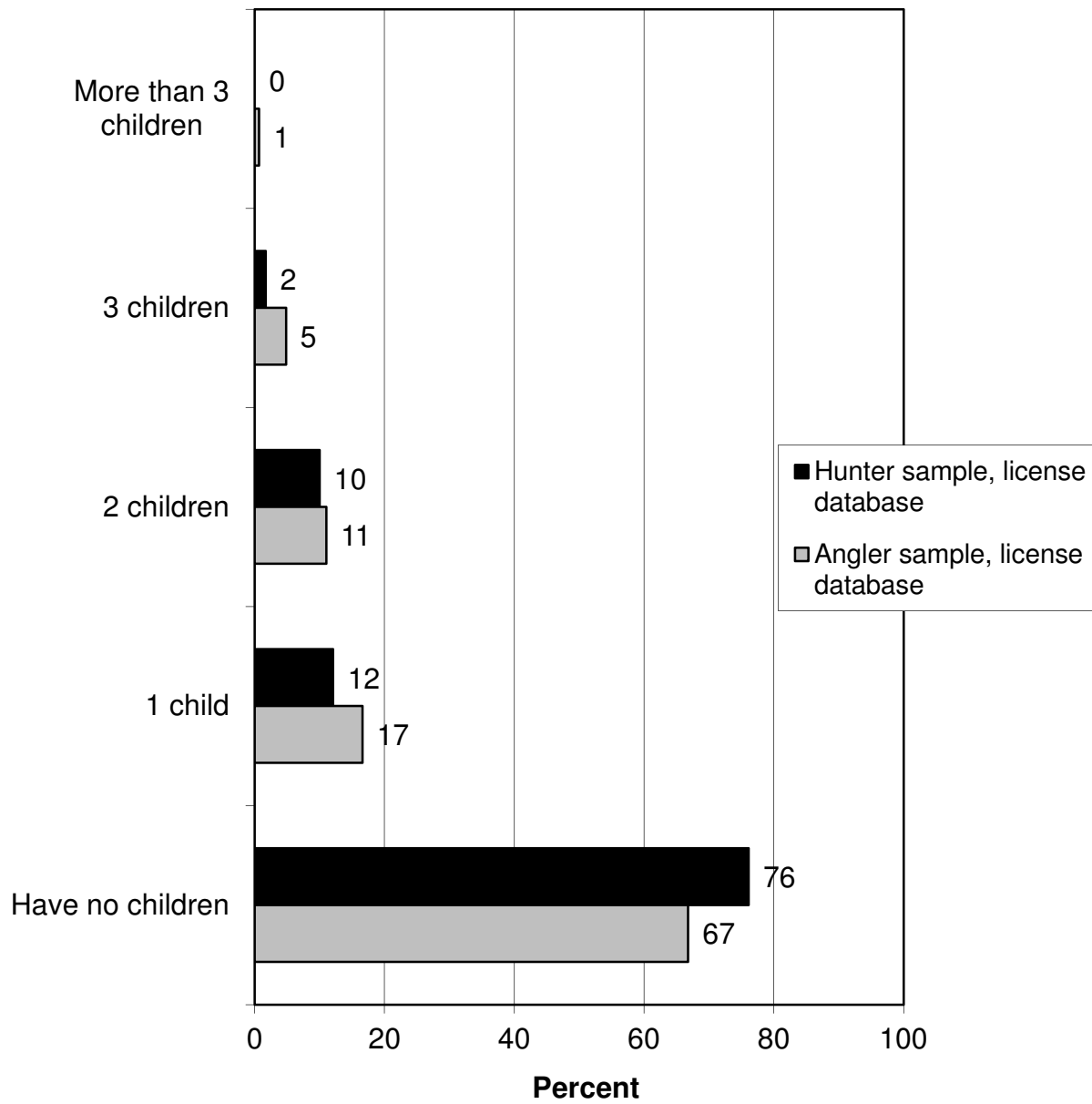
Q318. Which of these categories best describes your total household income before taxes last year?



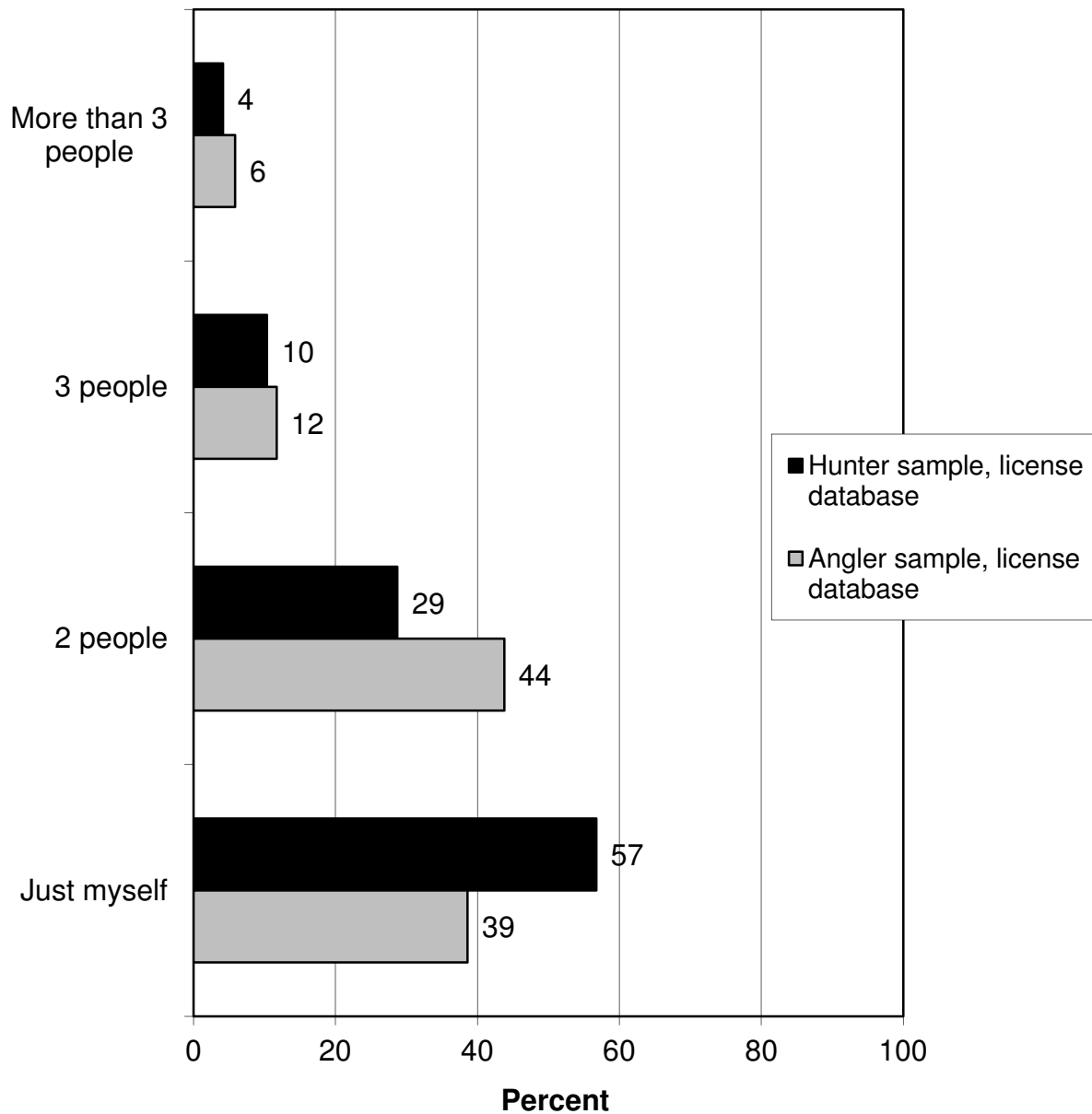
Q316. What races or ethnic backgrounds do you consider yourself? Please mention all that apply.



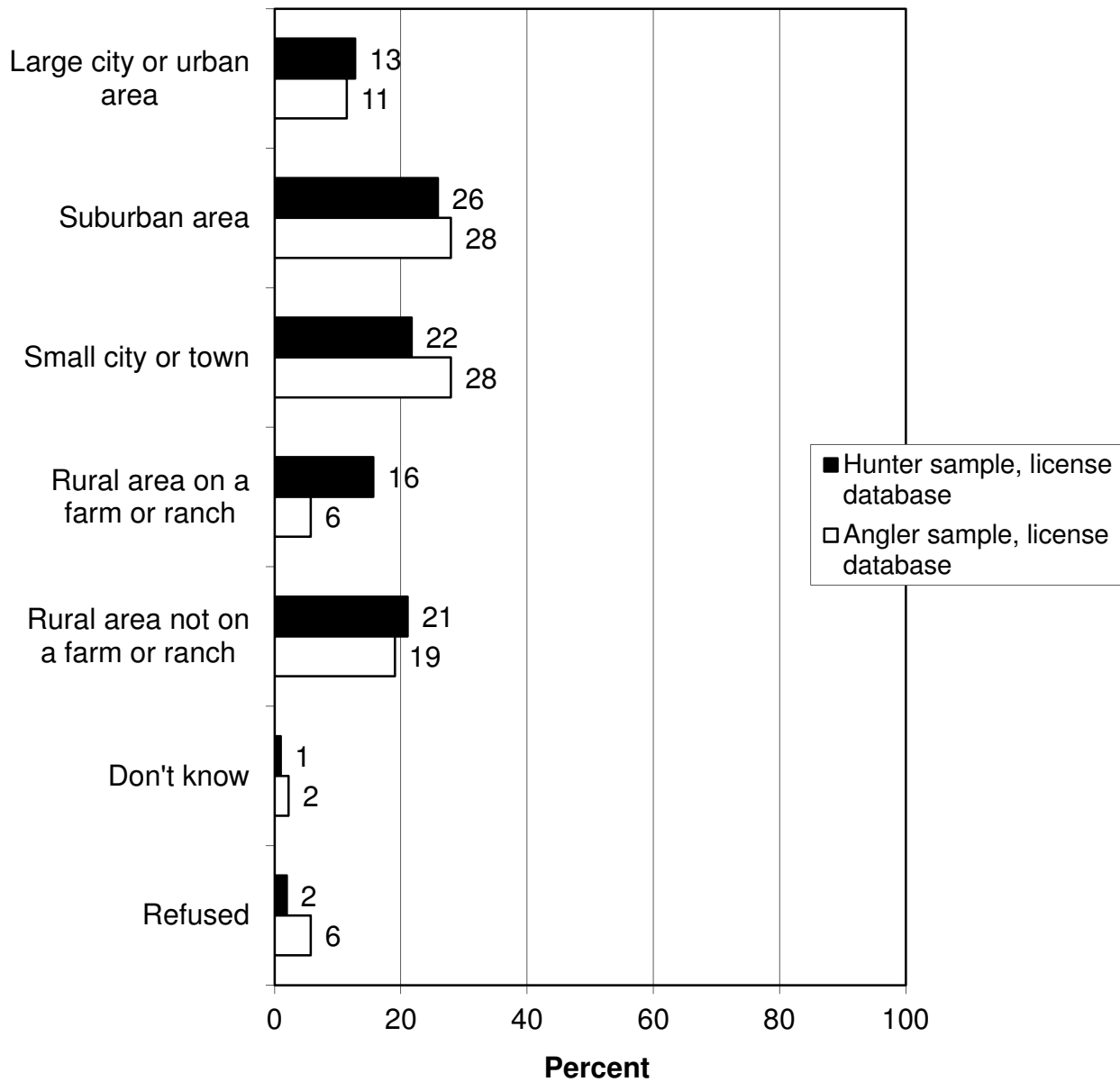
Q313. How many youth living in your household, 17 years of age or younger, [hunted / fished] in the past 3 years?



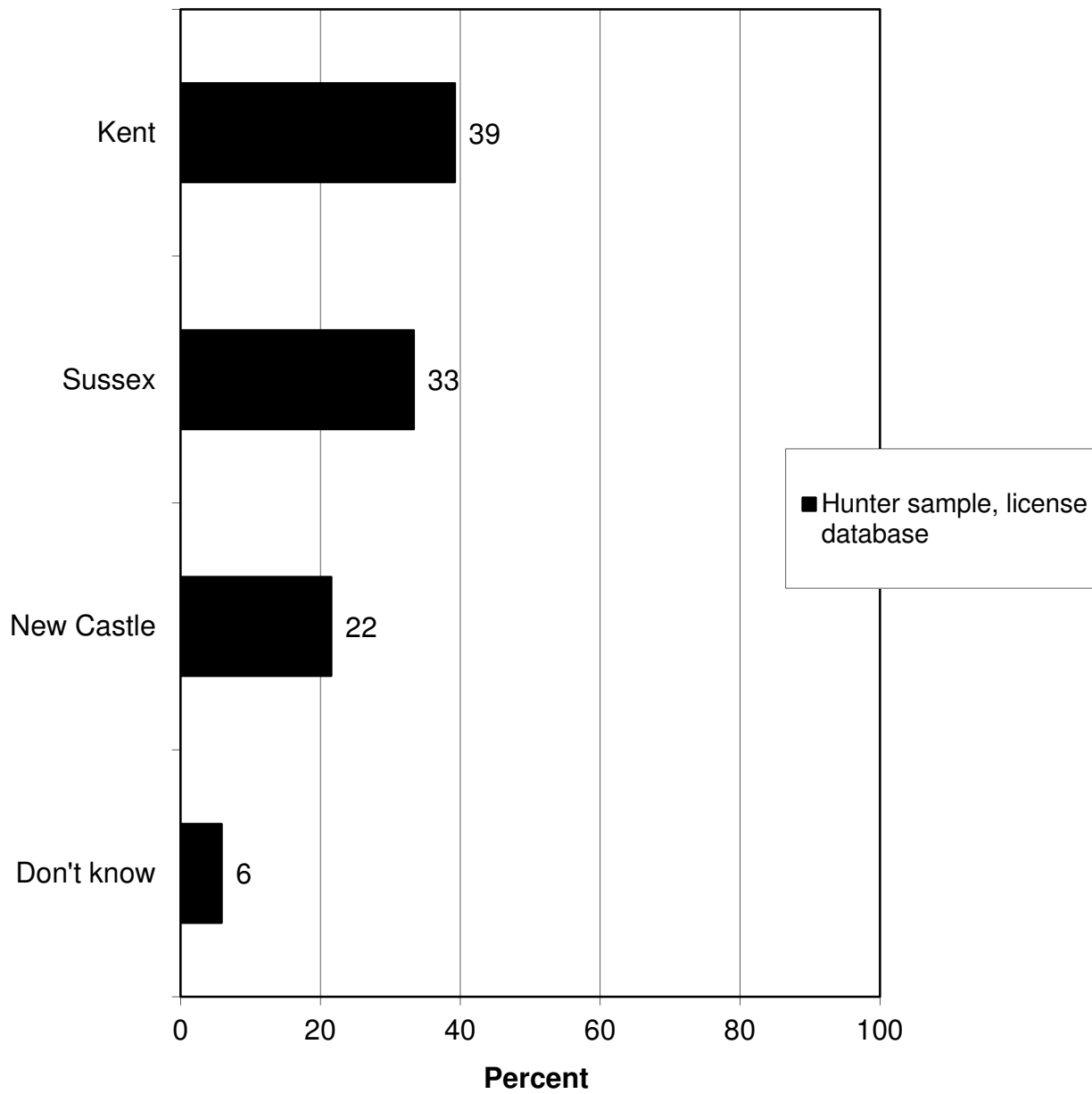
Q312. How many people living in your household, 18 years of age or older, including yourself, [hunted / fished] in the past 3 years?



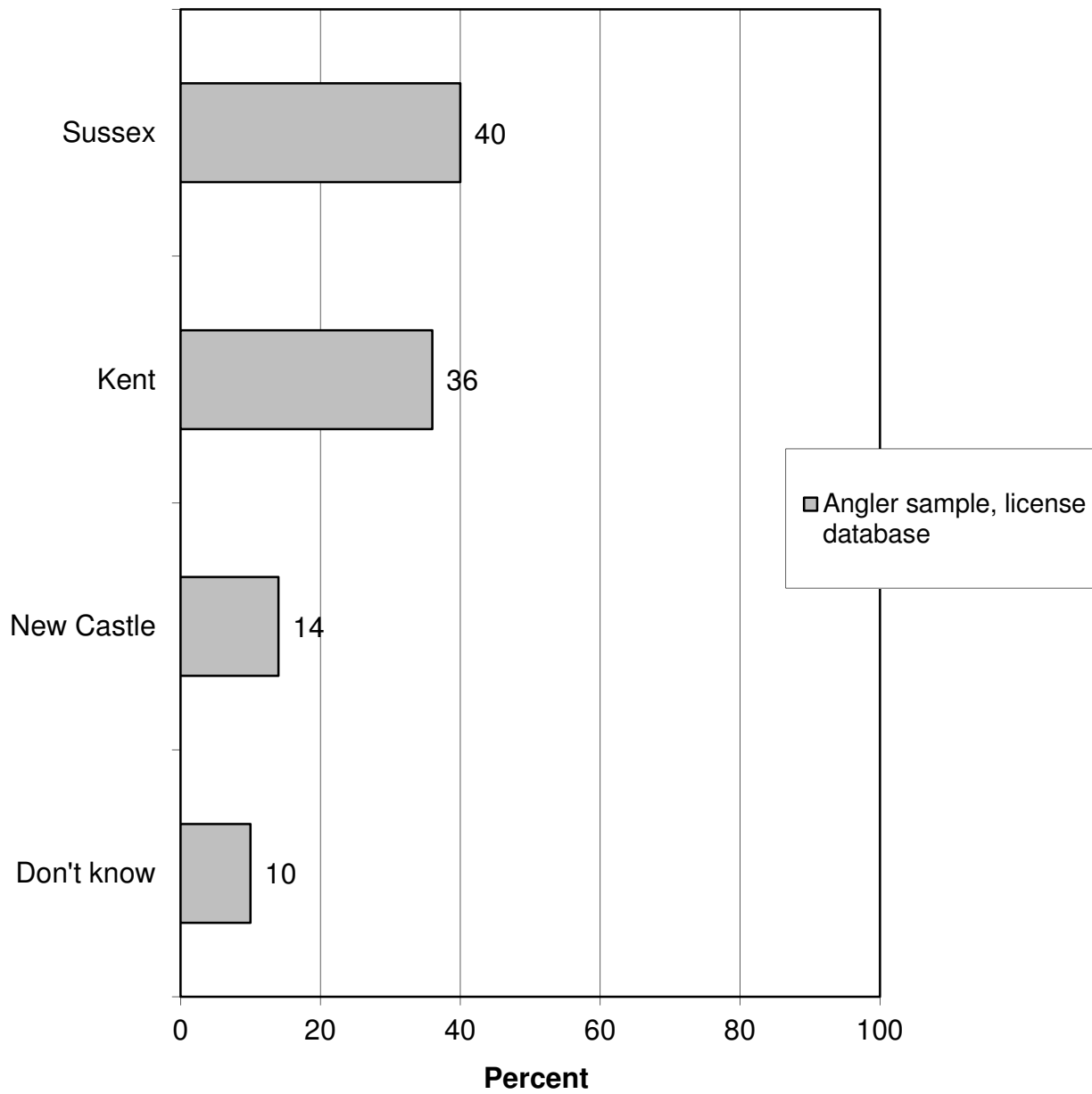
Q311. Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?



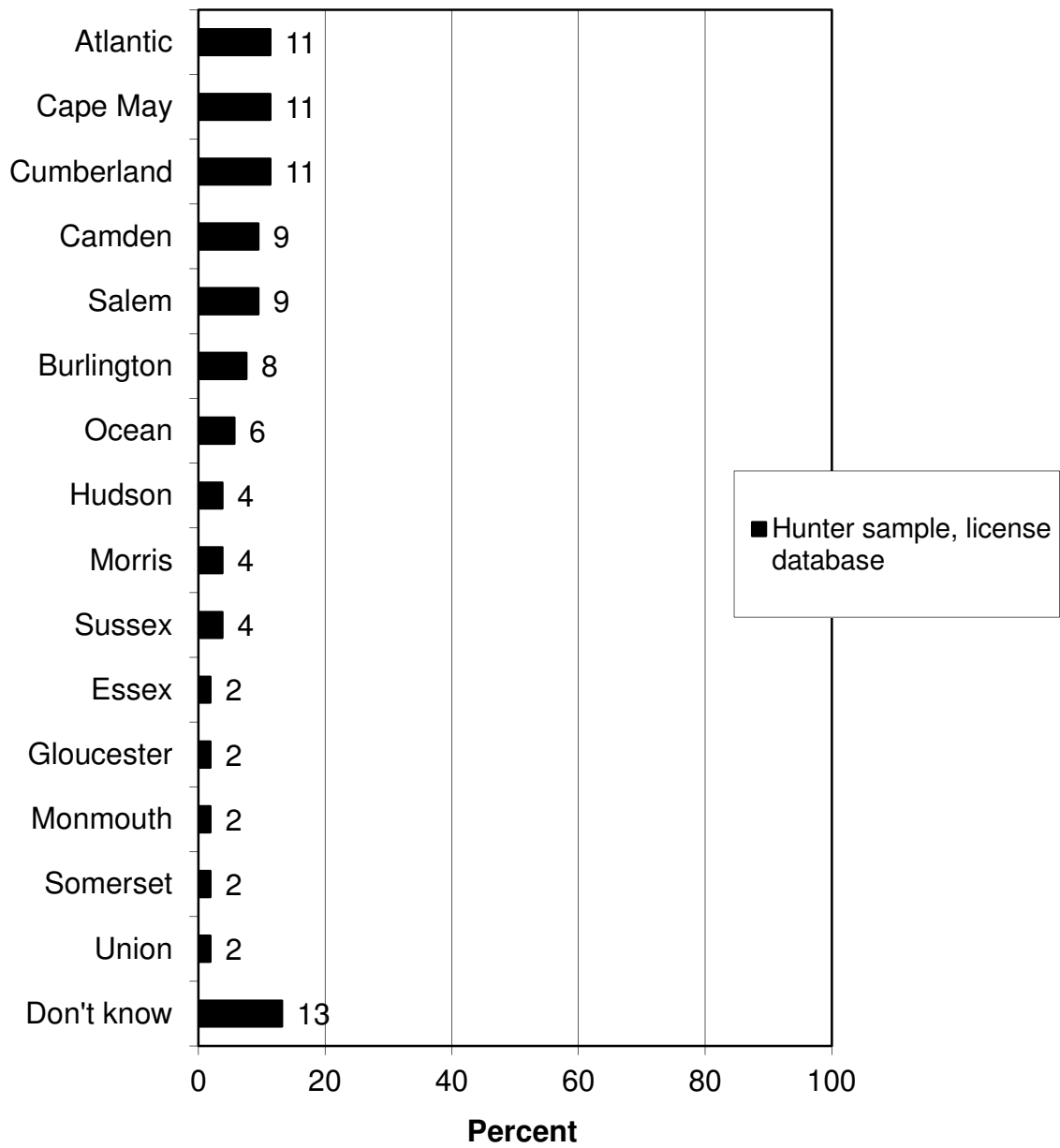
Q309. Our records indicate you currently live in Delaware. What county do you live in?



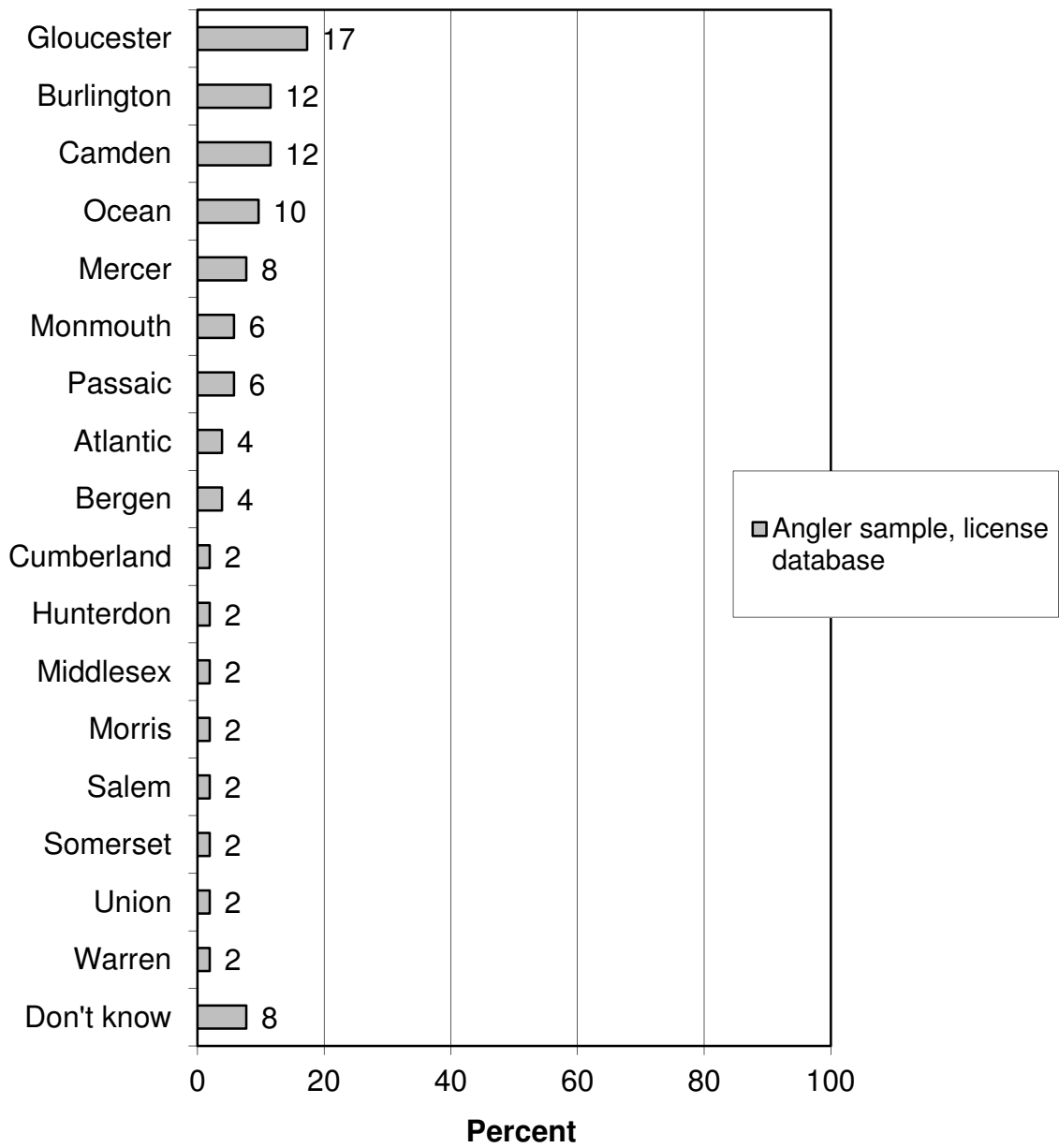
Q309. Our records indicate you currently live in Delaware. What county do you live in?



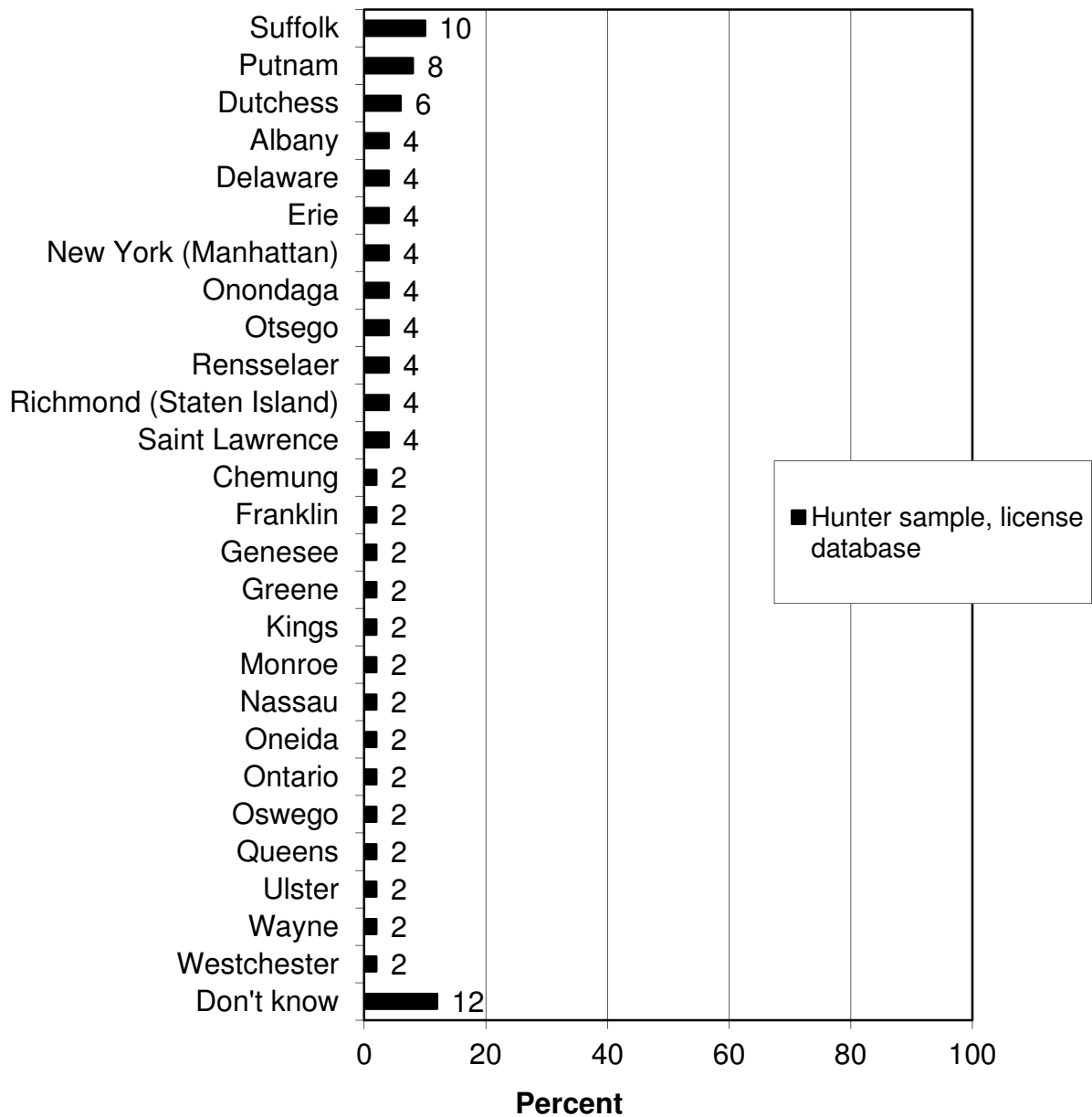
Q309. Our records indicate you currently live in New Jersey. What county do you live in?



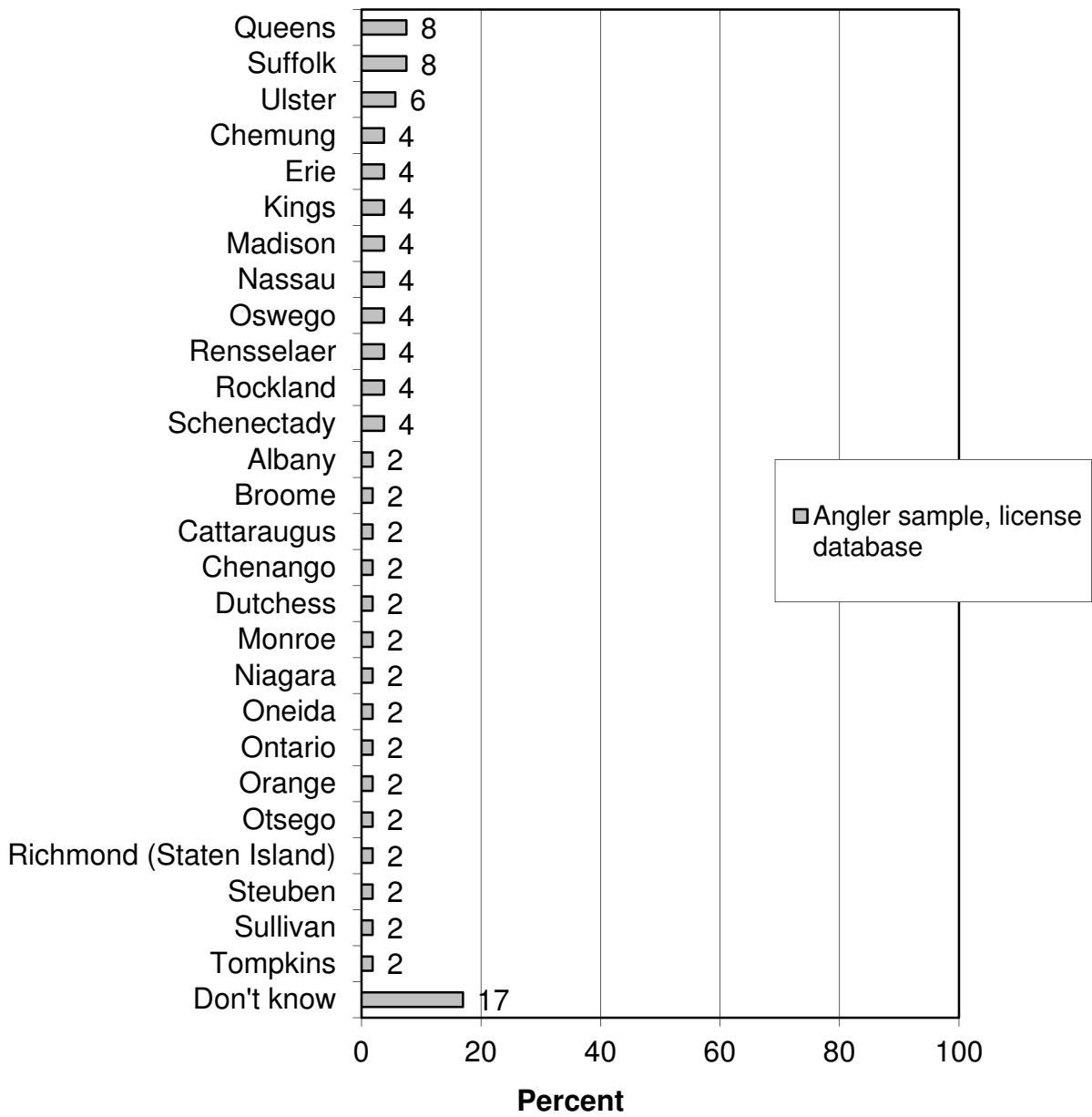
Q309. Our records indicate you currently live in New Jersey. What county do you live in?



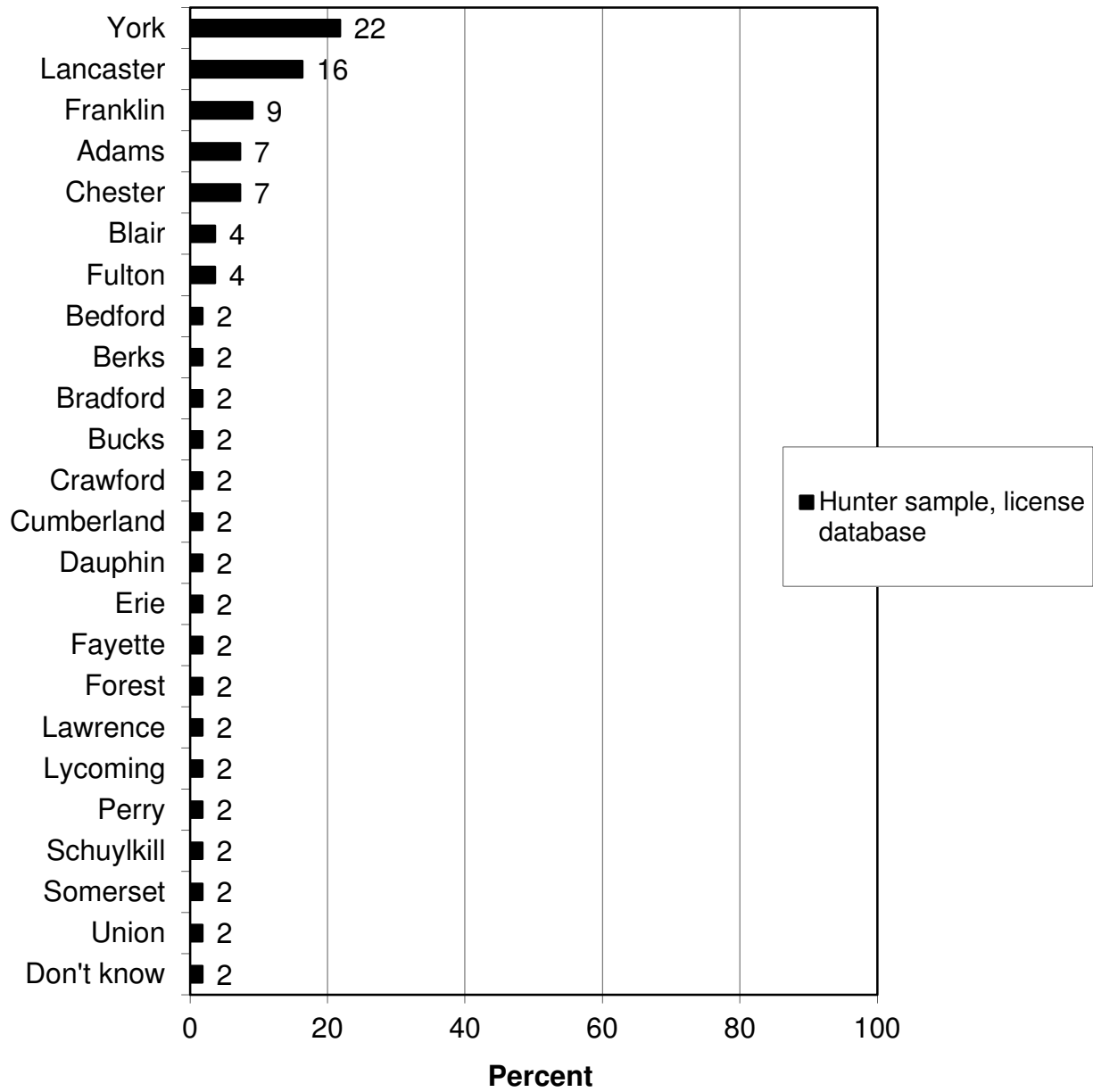
Q309. Our records indicate you currently live in New York. What county do you live in?



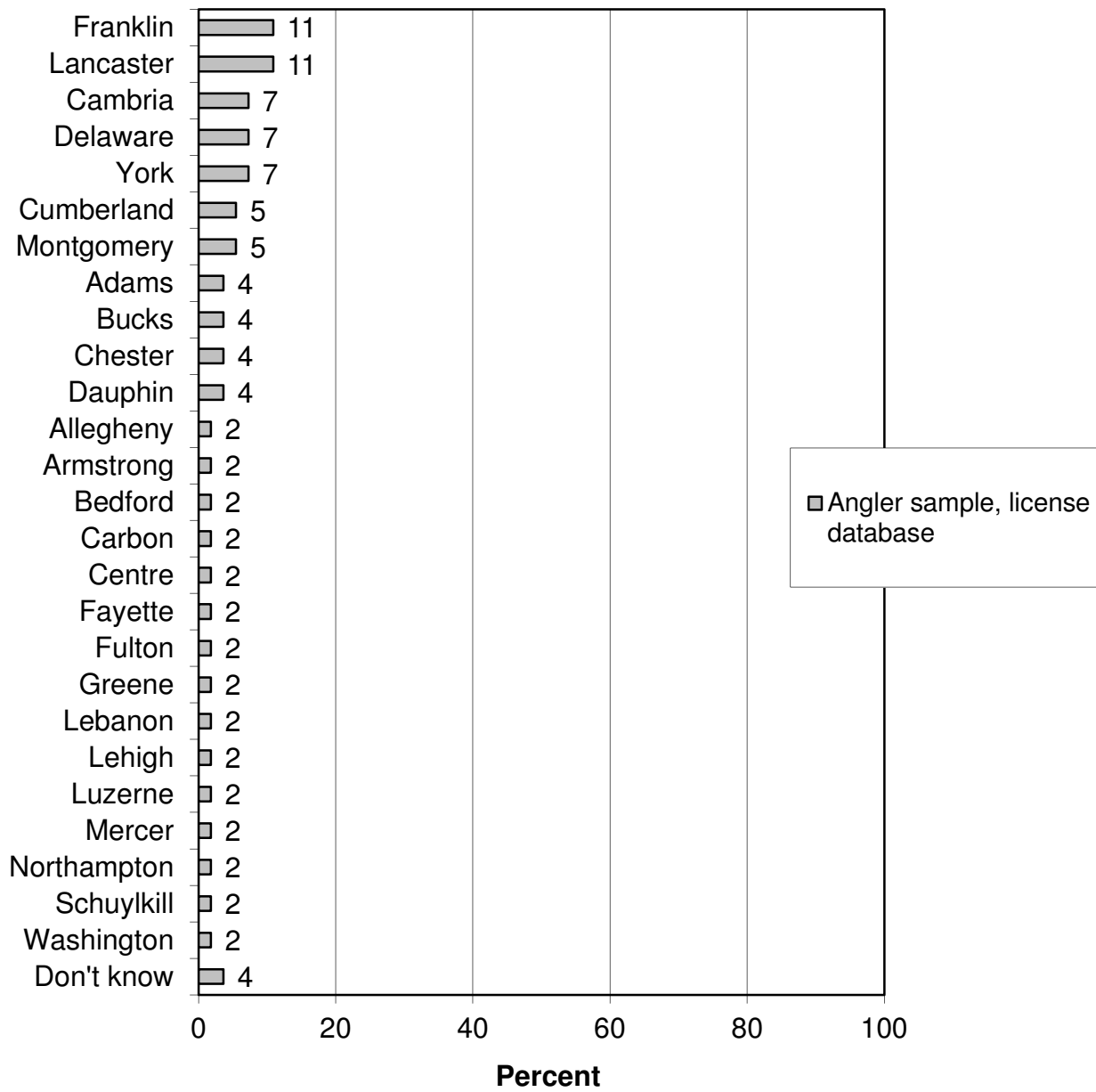
Q309. Our records indicate you currently live in New York. What county do you live in?



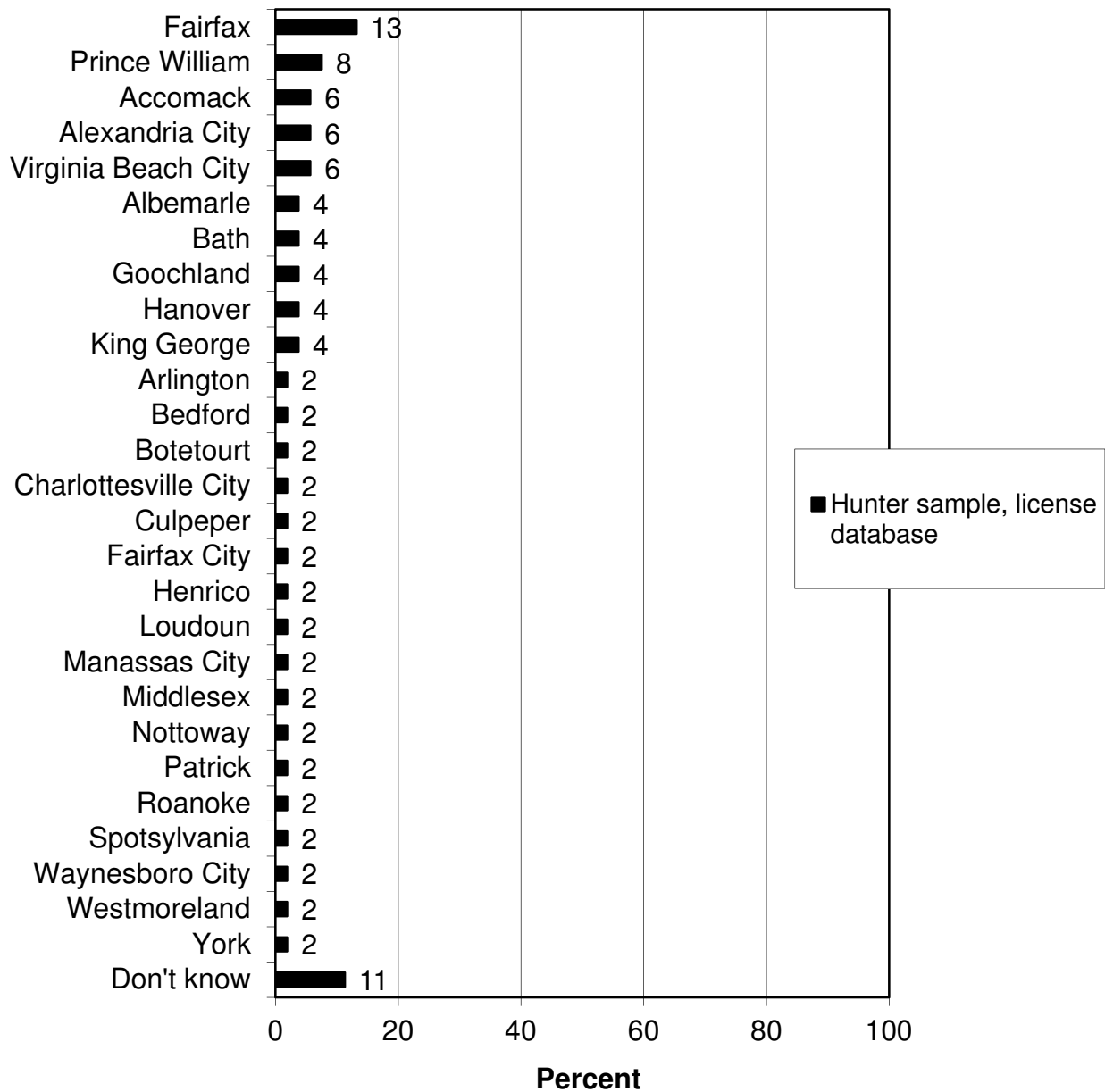
Q309. Our records indicate you currently live in Pennsylvania. What county do you live in?



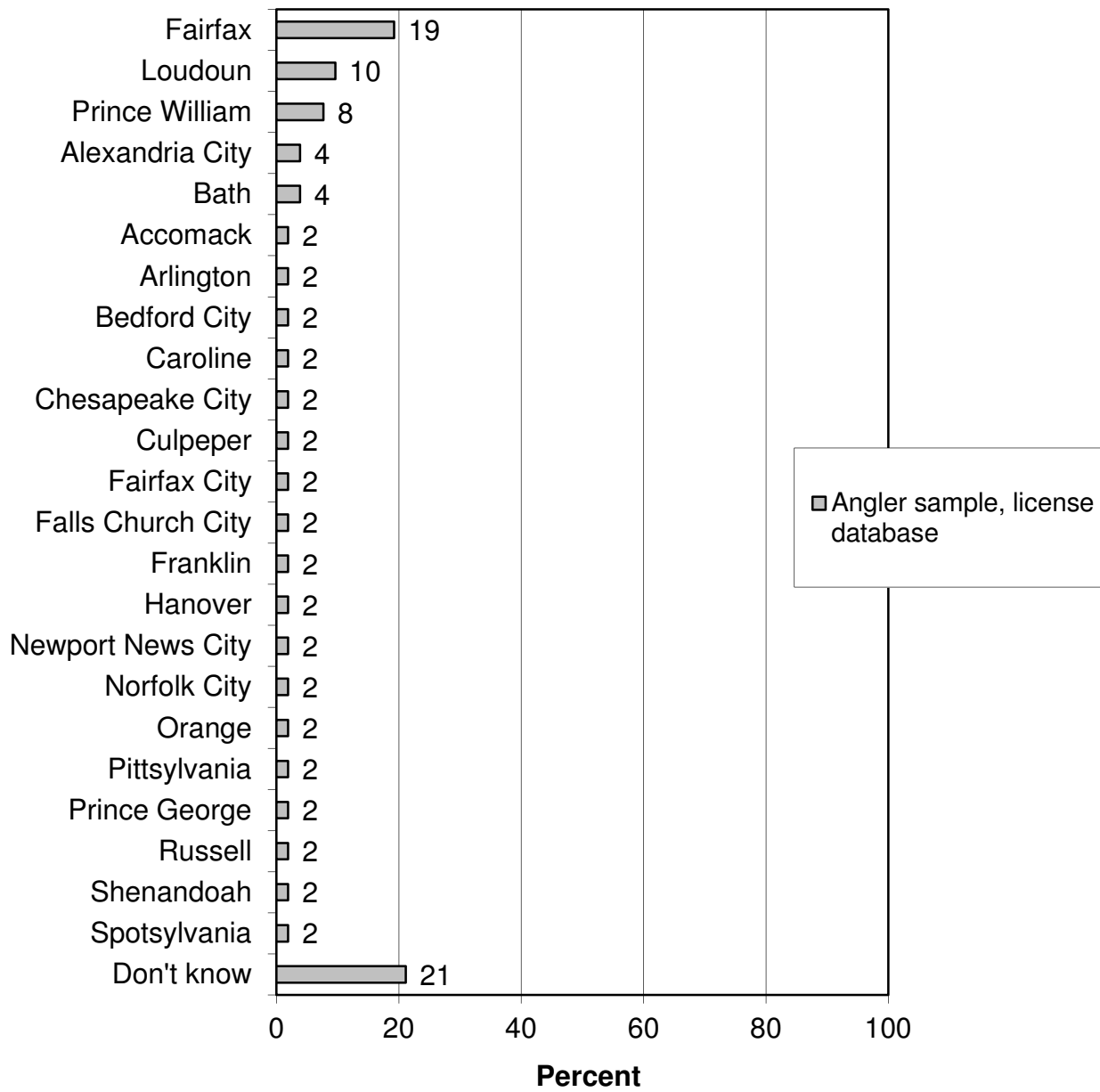
Q309. Our records indicate you currently live in Pennsylvania. What county do you live in?



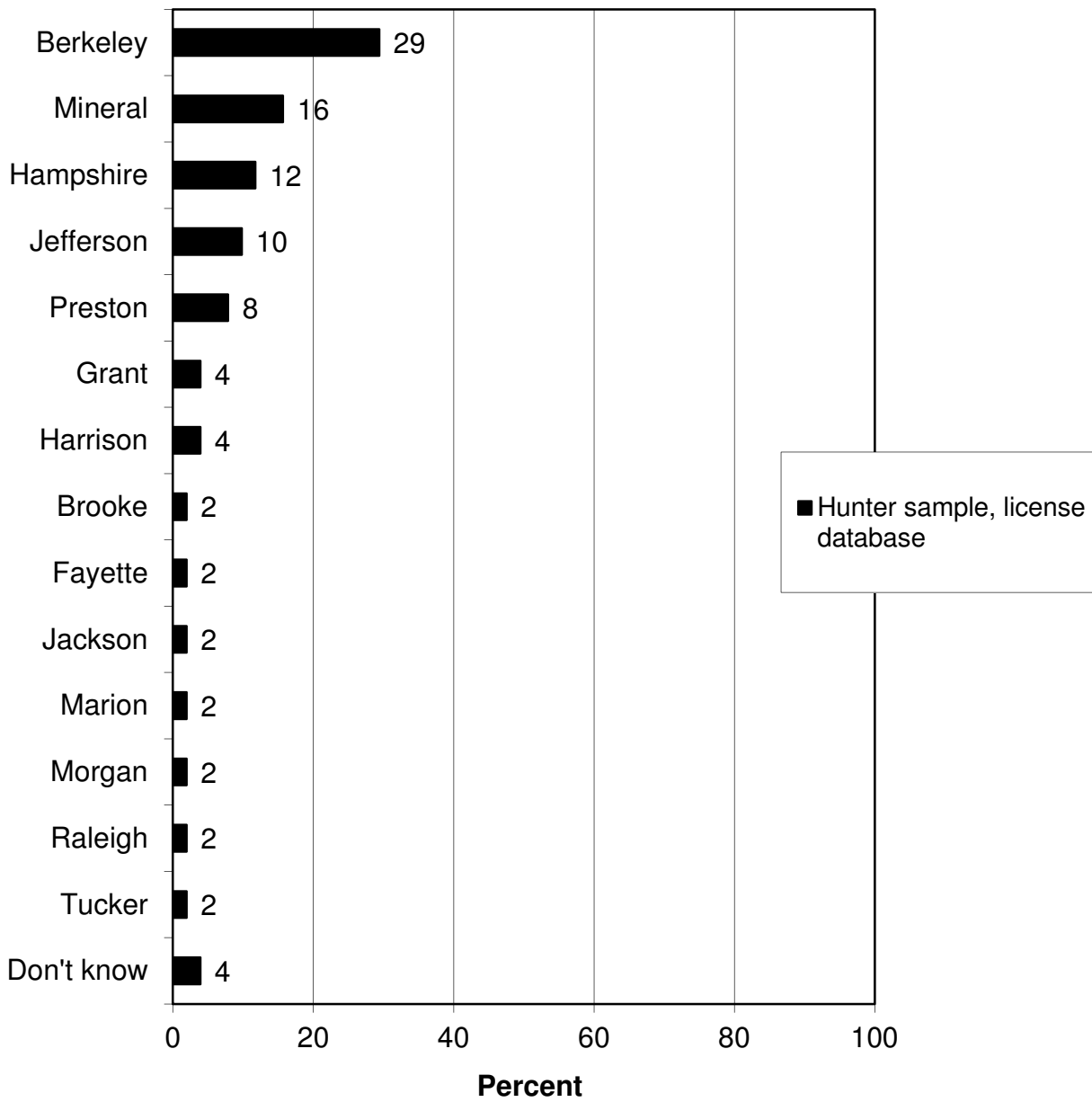
Q309. Our records indicate you currently live in Virginia. What county do you live in?



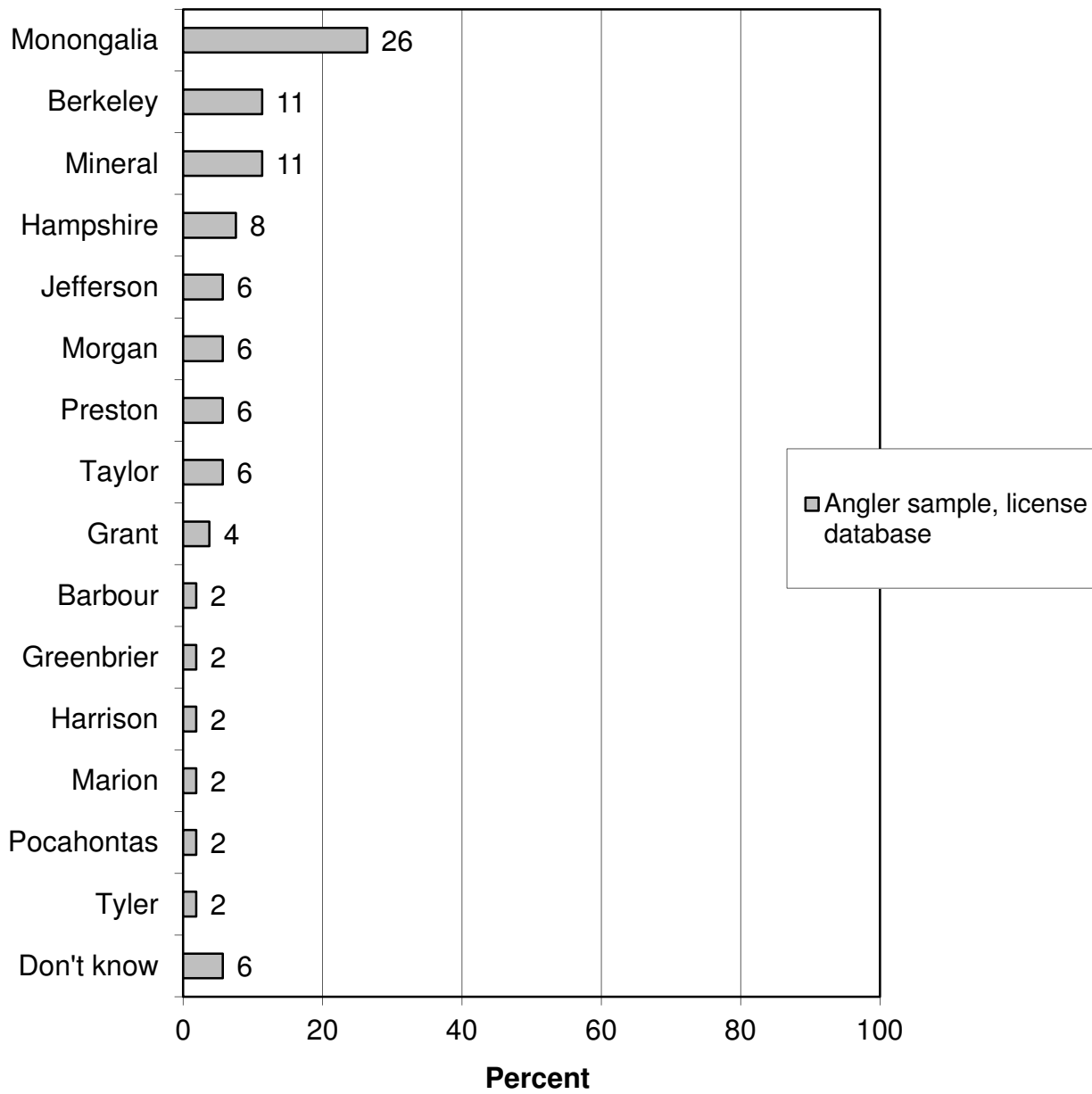
Q309. Our records indicate you currently live in Virginia. What county do you live in?



Q309. Our records indicate you currently live in West Virginia. What county do you live in?



Q309. Our records indicate you currently live in West Virginia. What county do you live in?



ABOUT RESPONSIVE MANAGEMENT

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

Utilizing our in-house, full-service telephone, mail, and web-based survey center with 50 professional interviewers, we have conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communication plans, needs assessments, and program evaluations.

Clients include the federal natural resource and land management agencies, most state fish and wildlife agencies, state departments of natural resources, environmental protection agencies, state park agencies, tourism boards, most of the major conservation and sportsmen's organizations, and numerous private businesses. Responsive Management also collects attitude and opinion data for many of the nation's top universities.

Specializing in research on public attitudes toward natural resource and outdoor recreation issues, Responsive Management has completed a wide range of projects during the past 24 years, including dozens of studies of hunters, anglers, wildlife viewers, boaters, park visitors, historic site visitors, hikers, birdwatchers, campers, and rock climbers. Responsive Management has conducted studies on endangered species; waterfowl and wetlands; and the reintroduction of large predators such as wolves, grizzly bears, and the Florida panther.

Responsive Management has assisted with research on numerous natural resource ballot initiatives and referenda and has helped agencies and organizations find alternative funding and increase their membership and donations. Additionally, Responsive Management has conducted major organizational and programmatic needs assessments to assist natural resource agencies and organizations in developing more effective programs based on a solid foundation of fact.

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 has also conducted focus groups and personal interviews with residents of the African countries of Algeria, Cameroon, Mauritius, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe.

Responsive Management routinely conducts surveys in Spanish and has conducted surveys in Chinese, Korean, Japanese and Vietnamese and has completed numerous studies with specific target audiences, including Hispanics; African-Americans; Asians; women; children; senior citizens; urban, suburban, and rural residents; large landowners; and farmers.

Responsive Management's research has been upheld in U.S. District Courts; used in peer-reviewed journals; and presented at major natural resource, fish and wildlife, and outdoor recreation conferences across the world. Company research has been featured in most of the nation's major media, including CNN, *The New York Times*, *The Wall Street Journal*, and on the front pages of *USA Today* and *The Washington Post*. Responsive Management's research has also been highlighted in *Newsweek* magazine.

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