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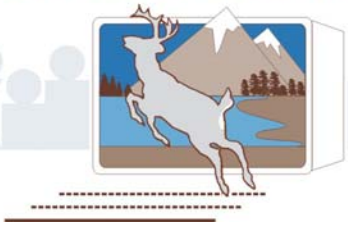

WASHINGTON STATE HUNTERS' OPINIONS ON DEER AND ELK HUNTING REGULATIONS, DEER AND ELK MANAGEMENT, AND NON-LEAD SHOT REGULATIONS

Conducted for Washington Department of Fish and Wildlife

by Responsive Management

2008

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EXECUTIVE SUMMARY

INTRODUCTION AND METHODOLOGY

This study was conducted for the Washington Department of Fish and Wildlife (the Department) to determine hunters' opinions on various potential deer and elk hunting regulations, deer and elk management, and non-lead shot regulations. The study entailed three separate telephone surveys of deer hunters, elk hunters, and bird hunters (referred to as the deer hunter survey, elk hunter survey, and non-lead survey).

For the surveys, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. The telephone survey questionnaires were developed cooperatively by Responsive Management and the Department. Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The surveys were conducted in October and November 2008. Responsive Management obtained 847 completed interviews with deer hunters, 418 completed interviews with elk hunters, and 406 completed interviews with small game hunters who had hunted specific species of birds. Responsive Management obtained a total of 1,671 completed interviews in the three surveys. The software used for data collection was Questionnaire Programming Language 4.1. The analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management.

OPINIONS ON WHITE-TAILED DEER HUNTING, ON TROPHY HUNTING, AND DEER MANAGEMENT

- Deer hunters were asked to rate three aspects of hunting white-tailed deer in GMUs 105 to 124: the importance of killing a trophy buck, the importance of killing *any* legal white-tailed deer, and the importance of participating in the general season white-tailed deer hunt with friends or family. Overall, the top rating was for participating in the general season white-tailed deer hunt with friends or family, followed by the rating for killing *any* legal white-tailed deer, with the rating for killing a trophy buck at the bottom of the ranking.

- Deer hunters appear to be moderate regarding the importance they place on killing a *trophy* white-tailed deer buck when hunting in GMUs 105 to 124: the most common answer in their rating (on a scale of 0 to 10, with 10 being the most important) of the importance is the midpoint, and otherwise they are well-distributed in their answers all along the scale of 0 to 10. The mean rating is 4.47.

- Deer hunters were also asked, in addition to the above question, to rate the importance of killing *any* legal white-tailed deer when hunting in GMUs 105 to 124, and the results show that killing *any* deer is somewhat important. The most common answer was the highest rating of 10 (30% gave this rating), and the mean rating was 6.69.

- Deer hunters place relatively high importance on participating in hunting with friends or family. Half of deer hunters (50%) rated this importance at a 10, and 91% gave a rating of the midpoint or higher. The mean rating was 8.20.

- The survey also asked about deer management in GMUs 105 to 124. Most hunters think that the number of mature bucks in the white-tailed deer population in these GMUs is too low (53%), and only a few think the number is too high (3%).

- The survey informed deer hunters that current hunting regulations allow the harvest of any white-tailed buck in GMUs 105 to 124. It then asked them if they would support or oppose a regulation limiting harvest to only bucks with 3 antler points or more on at least one side. While the majority oppose (58%), with most of that being *strong* opposition, a substantial percentage support (37%), evenly split between *strong* and *moderate* support.

- Following the question above, the survey informed deer hunters that some people believe that an antler restriction, as discussed above, would have three primary effects: it would increase the number of *trophy* bucks in that area, it would decrease the harvest of bucks and the harvest success rate of hunters there, and it would increase the buck-to-doe ratio. Respondents were then asked, based on knowing this information, if they would support or

oppose limiting harvest to only bucks with 3 antler points or more on at least one side. The results were little changed from above: 55% oppose, while 40% support.

- The most common reason for supporting the above regulation is that the hunter is willing to kill fewer deer to improve the chances to kill a mature buck in later years.
- The most common reason for opposing the above regulation is that the current season structure allows a better opportunity to harvest a deer.

- The final question in this section asked deer hunters to indicate the likelihood that they would hunt deer in GMUs 105 to 124 if the above regulation were implemented. The majority (52%) say that they would be *very* likely to do so, and another 27% would be *somewhat* likely (for a total of 79% being likely).

OPINIONS ON ELK HUNTING AND MANAGEMENT OF THE COLOCKUM ELK HERD

- This section of the report concerns the Colockum elk herd, which consists of those elk within the boundaries identified in the Department's *Colockum Elk Herd Management Plan*. This area includes, but is not limited to, GMUs 249 (Alpine), 251 (Mission), 328 (Naneum), 329 (Quilomene), and 335 (Teanaway).

- Before the survey asked any questions about the Colockum elk herd, the survey informed elk hunters that the Department manages the Colockum elk herd for both hunting opportunities and the health of the herd itself. Respondents were also informed that in recent years the Colockum elk herd has consistently been below post-hunt population objectives for bulls, and that Department biologists believe a cause of this is low yearling bull survival. Respondents then had two options explained to them for addressing the problem. One option is to change the description of a legal bull elk for harvest during the general hunting season. The other option is to allow only special permit hunting for all bull elk.

- After the above options were explained, elk hunters were asked to choose between the two options (as well as a third option that is a combination of the first two options). The options as explained in detail in this question were as follows:
  - Option A: Change the legal bull elk description for the general hunting season to one-by-one spike bulls only for the Colockum elk herd. Spike bull elk with antlers that fork or branch would *not* be legal to kill.
  - Option B: Change bull elk hunting from general season bull hunting to special permit bull elk hunting only for the Colockum elk herd. All bull elk would be legal to kill for hunters with special permits only. No general season bull elk hunting would be allowed for Colockum elk.
  - Option C: A combination of both options with some GMUs for the Colockum elk herd open for hunting one-by-one spikes only during general season and hunting branch-antlered bulls by special permit only, and some GMUs open for all bull elk hunting by special permit only.
  - The combination (Option C) was the most popular option (28% gave that answer). Meanwhile, Options A and B had nearly equal support (21% and 22%, respectively).

- Those elk hunters who chose either option B or C were asked in follow-up to indicate which GMUs for Colockum elk should be for special permit only bull elk hunting. The leading answers, in order, are GMU 328 (Naneum) (45%), GMU 329 (Quilomene) (36%), and GMU 335 (Teanaway) (34%).

- Elk hunters were asked to indicate the likely effects on their elk hunting if the Department were to designate one or two GMUs for Colockum elk as special permit only for bull elk hunting. The answer set had four choices: continue to hunt Colockum elk, but only in the general season GMUs; continue to hunt Colockum elk, but only when a special permit was drawn; continue to hunt Colockum elk in both the general season GMUs and in special permit GMUs when a permit was drawn; or *not* hunt Colockum elk at all but hunt a different elk herd in Washington.
  - The most common response was that the hunter would continue to hunt Colockum elk in both the general season GMUs and in special permit GMUs when a permit was drawn

(27%), but two other responses had more than 20%: the hunter would *not* hunt Colockum elk at all but hunt a different elk herd in Washington (23%) or the hunter would continue to hunt Colockum elk, but only when a special permit was drawn (22%).

- In follow-up, those who indicated that they would hunt a different elk herd in Washington were asked to name which herd they would hunt and in which GMU they would hunt elk. Most commonly, they would hunt the Yakima herd (the leading answer by far), and most commonly they would hunt in GMUs 335 and 328.

OPINIONS ON NON-LEAD SHOT REGULATIONS

- For this survey, small game hunters who had hunted wild turkey, mourning dove, band-tailed pigeon, forest grouse, chukar, partridge (gray or Hungarian), pheasant, or quail (California, valley, northern bobwhite, or mountain) in the last 3 years were interviewed. Hereinafter, they are referred to as bird hunters.

- Bird hunters are about evenly split in support and opposition to a regulation that would require hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department: 45% support, but 43% oppose. Also note that most support is moderate, but most opposition is strong.
  - In follow-up, respondents were then informed that some scientists have documented that some wildlife have become sick or died as the result of ingesting lead shot, and then they were asked about their support or opposition to the same regulation banning lead shot. Support rises slightly: 52% support, and 42% oppose.
  - Those who oppose were asked for their reasoning. They most commonly indicate that they do not think there is anything wrong with lead shot. Another important reason is that non-lead shot is not deemed as being as effective as lead shot.

- Bird hunters were then asked to indicate their likely subsequent hunting activity if a regulation were implemented requiring hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by

the Department. The large majority (66%) say it would have no effect on their subsequent bird hunting frequency.

- In follow-up, those who would go bird hunting on these lands less frequently (or stop altogether) were asked to indicate why. The top answers are that non-lead shot is too expensive and that it is not as effective as lead shot.
- Also in follow-up, respondents were asked if they would make any other changes to their hunting not previously discussed in the survey if the non-lead shot regulation were implemented. Most respondents indicated that they would have no other changes.

INTERNET ACCESS AND VISITS TO THE DEPARTMENT WEBSITE

- Most deer, elk, and bird hunters access the Internet at home (more than 77% of any of the three groups). Typically about one-fourth access it at work. Meanwhile, from 12% to 18% indicate not accessing the Internet.
  - Note that highspeed connections far exceed dial-up connections.

- More than three-quarters of deer, elk, and bird hunters indicated that they have visited the Department's website in the past 6 months, most typically no more than six times in that time period.

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INTRODUCTION AND METHODOLOGY

This study was conducted for the Washington Department of Fish and Wildlife (the Department) to determine deer, elk, and bird hunters' opinions on various potential deer and elk hunting regulations, deer and elk management, and non-lead shot regulations. The study entailed three separate telephone surveys as follows:

- A deer hunter survey of big game licensed hunters who reported hunting white-tailed deer in any of the following Game Management Units (GMUs) in 2006 or 2007: 105 (Kelly Hill), 108 (Douglas), 111 (Aladdin), 113 (Selkirk), 117 (49 Degrees North), 121 (Huckleberry), or 124 (Mount Spokane).
- An elk hunter survey of big game licensed hunters who reported hunting elk in any of the following GMUs in 2006 or 2007: 249 (Alpine), 251 (Mission), 328 (Naneum), 329 (Quilomene), or 335 (Teanaway).
- A non-lead survey of small game license holders (excluding those with only a temporary license) for the 2007 license year who had hunted any one of the following species in the past 3 years: wild turkey, mourning dove, band-tailed pigeon, forest grouse, chukar, partridge (gray or Hungarian), pheasant, or quail (California, valley, northern bobwhite, or mountain). Note that if they hunted turkey and/or forest grouse only, they received fewer questions in the survey.

Specific aspects of the research methodology are discussed below.

For the surveys, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. In addition, a central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of natural resources and outdoor recreation. The telephone survey questionnaires were developed cooperatively by Responsive Management and the Department. Responsive Management conducted pre-tests of the questionnaires to ensure proper wording, logic, and flow.

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 project briefings with the interviewers prior to the administration of these surveys. 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 instrument, reading of the survey instrument, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey instrument. 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. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians checked each completed survey to ensure clarity and completeness.

Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday 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 surveys were conducted in October and November 2008. Responsive Management obtained 847 completed interviews with deer hunters who had hunted in certain GMUs (as discussed previously), 418 completed interviews with elk hunters who had hunted in certain GMUs (as discussed previously), and 406 completed interviews with small game hunters who had hunted specific species of birds (as discussed previously). Responsive Management obtained a total of 1,671 completed interviews in the three surveys.

The software used for data collection was Questionnaire Programming Language 4.1 (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 instruments were 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 analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management.

Throughout this report, findings of the telephone surveys are reported at a 95% confidence interval. For the entire sample of deer hunters, the sampling error is at most plus or minus 3.31 percentage points. For the entire sample of elk hunters, the sampling error is at most plus or minus 4.64 percentage points. For the entire sample of small game hunters in the non-lead survey, the sampling error is at most plus or minus 4.84 to 4.85 percentage points. Sampling errors were calculated using the formula described below, with a sample size of 847 deer hunters and a population size of 26,512 deer hunters in the sample provided; a sample size of 418 elk hunters and a population size of 6,556 elk hunters in the sample provided; and a sample size of 406 small game hunters who had hunted birds and a population size of 44,000 to 66,000 of that type of hunter in the sample provided.

Sampling Error Equation

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

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).

OPINIONS ON WHITE-TAILED DEER HUNTING, ON TROPHY HUNTING, AND DEER MANAGEMENT

- Deer hunters were asked to rate three aspects of hunting white-tailed deer in GMUs 105 to 124: the importance of killing a trophy buck, the importance of killing *any* legal white-tailed deer, and the importance of participating in the general season white-tailed deer hunt with friends or family. The order of the three questions was randomized to prevent any bias in the responses due to the order in which the questions were asked. Overall, the top rating was for participating in the general season white-tailed deer hunt with friends or family, followed by the rating for killing *any* legal white-tailed deer, with the rating for killing a trophy buck at the bottom of the ranking. Graphs are shown comparing these three questions. The individual results are detailed below.

- Deer hunters appear to be moderate regarding the importance they place on killing a *trophy* white-tailed deer buck when hunting in GMUs 105 to 124: the most common answer in their rating (on a scale of 0 to 10, with 10 being the most important) of the importance is the midpoint, and otherwise they are well-distributed in their answers all along the scale of 0 to 10. For example, 10% rate the importance as a 10, while 15% rate the importance as a 0. The mean rating is 4.47.

- Deer hunters were also asked, in addition to the above question, to rate the importance of killing *any* legal white-tailed deer when hunting in GMUs 105 to 124, and the results show that killing *any* deer is somewhat important. The most common answer was the highest rating of 10 (30% gave this rating), and the mean rating was 6.69.

- Deer hunters place relatively high importance on participating in hunting with friends or family. Half of deer hunters (50%) rated this importance at a 10, and 91% gave a rating of the midpoint or higher. The mean rating was 8.20.

- The survey also asked about deer management in GMUs 105 to 124. Most hunters think that the number of mature bucks in the white-tailed deer population in these GMUs is too low (53%), and only a few think the number is too high (3%). (The remaining gave a neutral answer or did not know.)

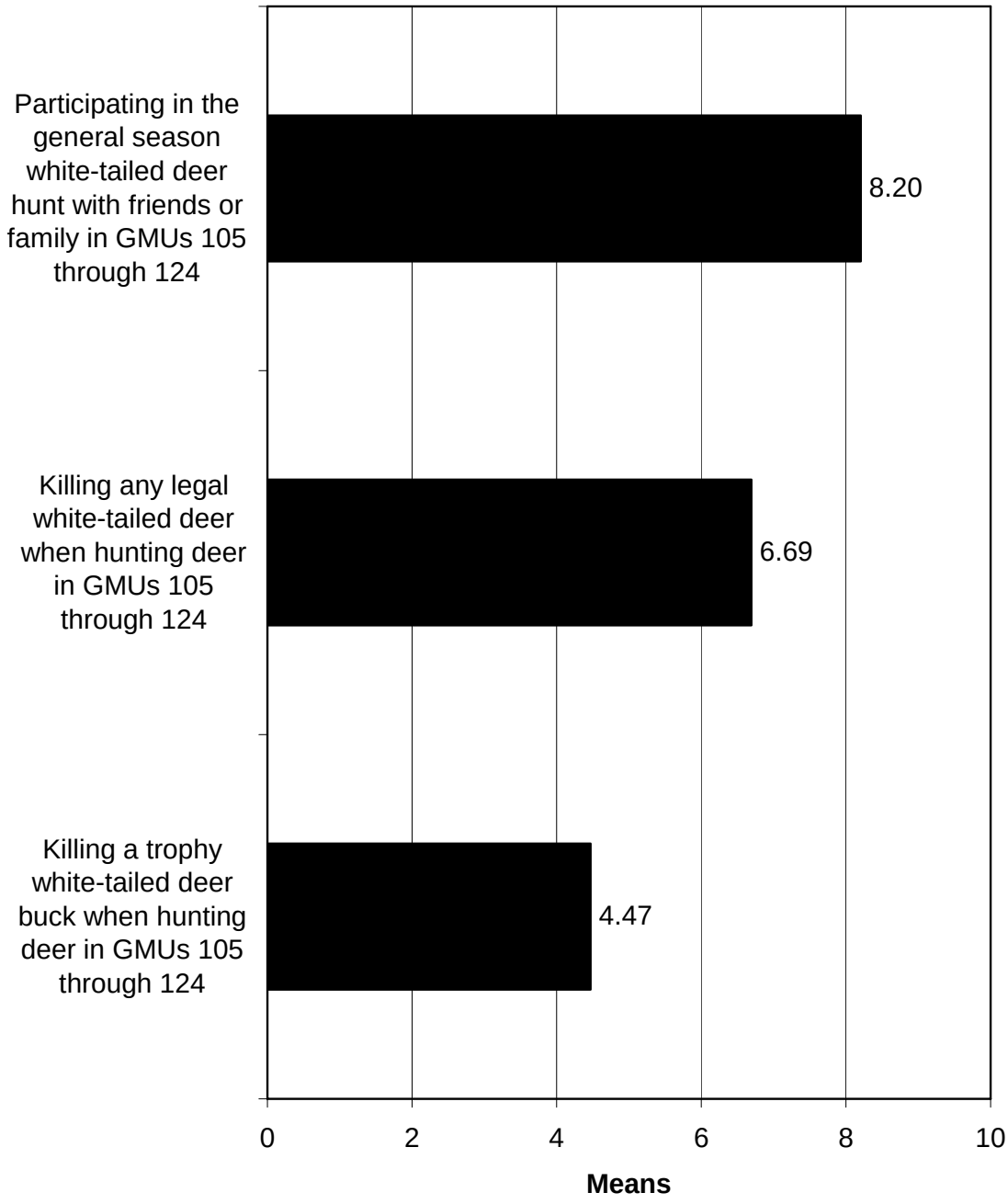
- The survey informed deer hunters that current hunting regulations allow the harvest of any white-tailed buck in GMUs 105 to 124. It then asked them if they would support or oppose a regulation limiting harvest to only bucks with 3 antler points or more on at least one side. While the majority oppose (58%), with most of that being *strong* opposition, a substantial percentage support (37%), evenly split between *strong* and *moderate* support.

- Following the question above, the survey informed deer hunters that some people believe that an antler restriction, as discussed above, would have three primary effects: it would increase the number of *trophy* bucks in that area, it would decrease the harvest of bucks and the harvest success rate of hunters there, and it would increase the buck-to-doe ratio. Respondents were then asked, based on knowing this information, if they would support or oppose limiting harvest to only bucks with 3 antler points or more on at least one side. The results were little changed from above: 55% oppose, while 40% support.
  - The most common reason for supporting the above regulation is that the hunter is willing to kill fewer deer to improve the chances to kill a mature buck in later years. Other important reasons to support include the perception that the current season structure does not provide adequate opportunity to kill a mature buck, the hunters' preference for restricting harvest to bucks with at least 3 antler points, the hunters' desire to increase the quality of bucks, and the hunters' desire to increase the population of bucks.
  - The most common reasons for opposing the above regulation is that the current season structure allows a better opportunity to harvest a deer, that the hunter simply prefers the current season structure, that the current season structure offers adequate opportunity to harvest a mature buck, that there are too many deer in that area, that the hunter does not believe the regulation will improve the herd, or that younger bucks have better meat.

- The final question in this section asked deer hunters to indicate the likelihood that they would hunt deer in GMUs 105 to 124 if the above regulation were implemented. The majority (52%) say that they would be *very* likely to do so, and another 27% would be *somewhat* likely (for a total of 79% being likely). On the other hand, 18% would be not at all likely.

- Note that for all these questions of deer hunters, a crosstabulation was run by region: local northeast counties, Spokane County, westside counties, and "other" counties. Each regional graph is shown after the straight tabulation graph for each question.

Q13, Q15, Q17. On a scale of 0 - 10 where 0 is "not at all important" and 10 is "extremely important," the mean rating of importance for the following deer hunting activities in Washington.



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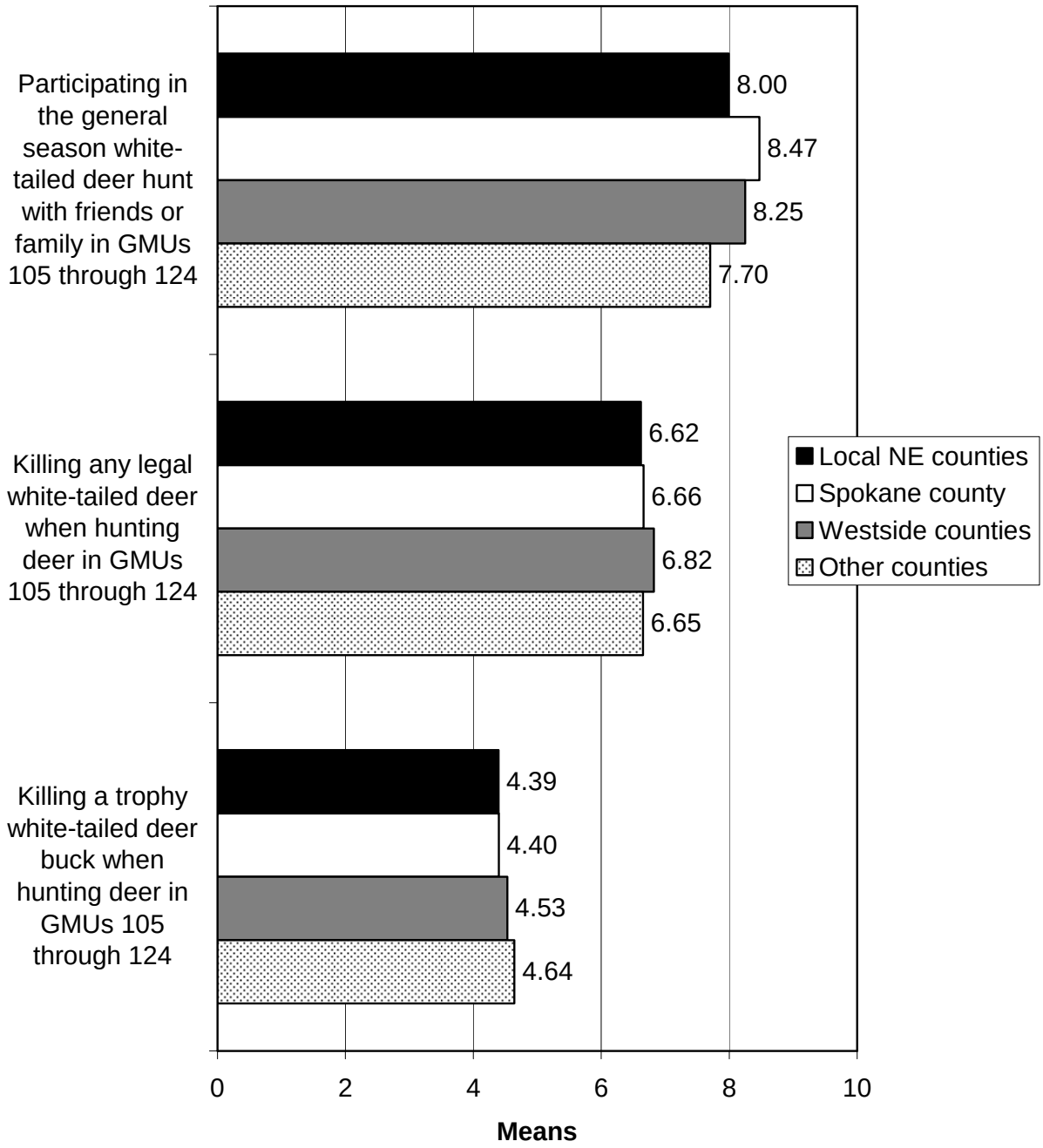
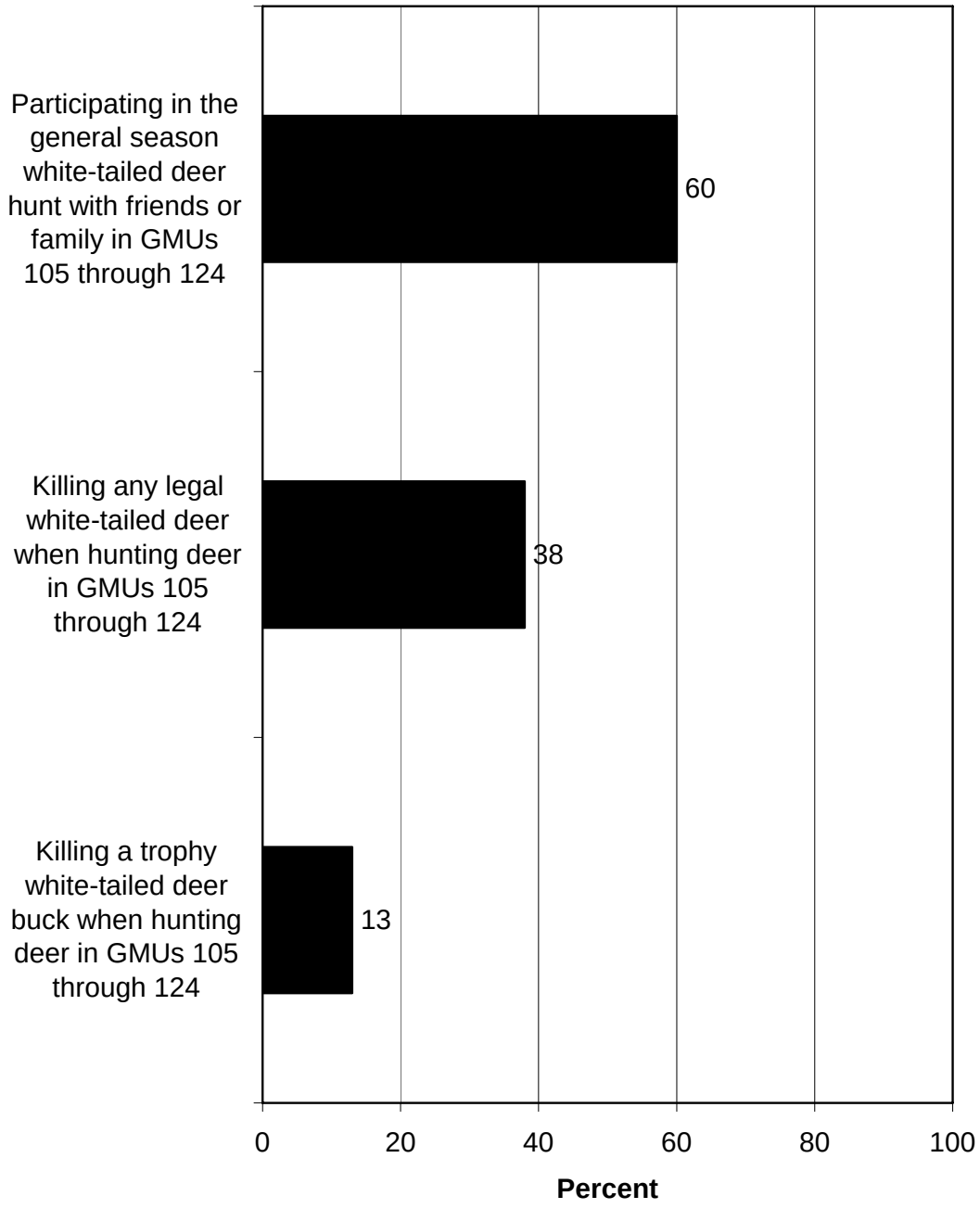


Q13, Q15, Q17. On a scale of 0 - 10 where 0 is "not at all important" and 10 is "extremely important," those who rated the importance for the following deer hunting activities in Washington as a 9 or 10.



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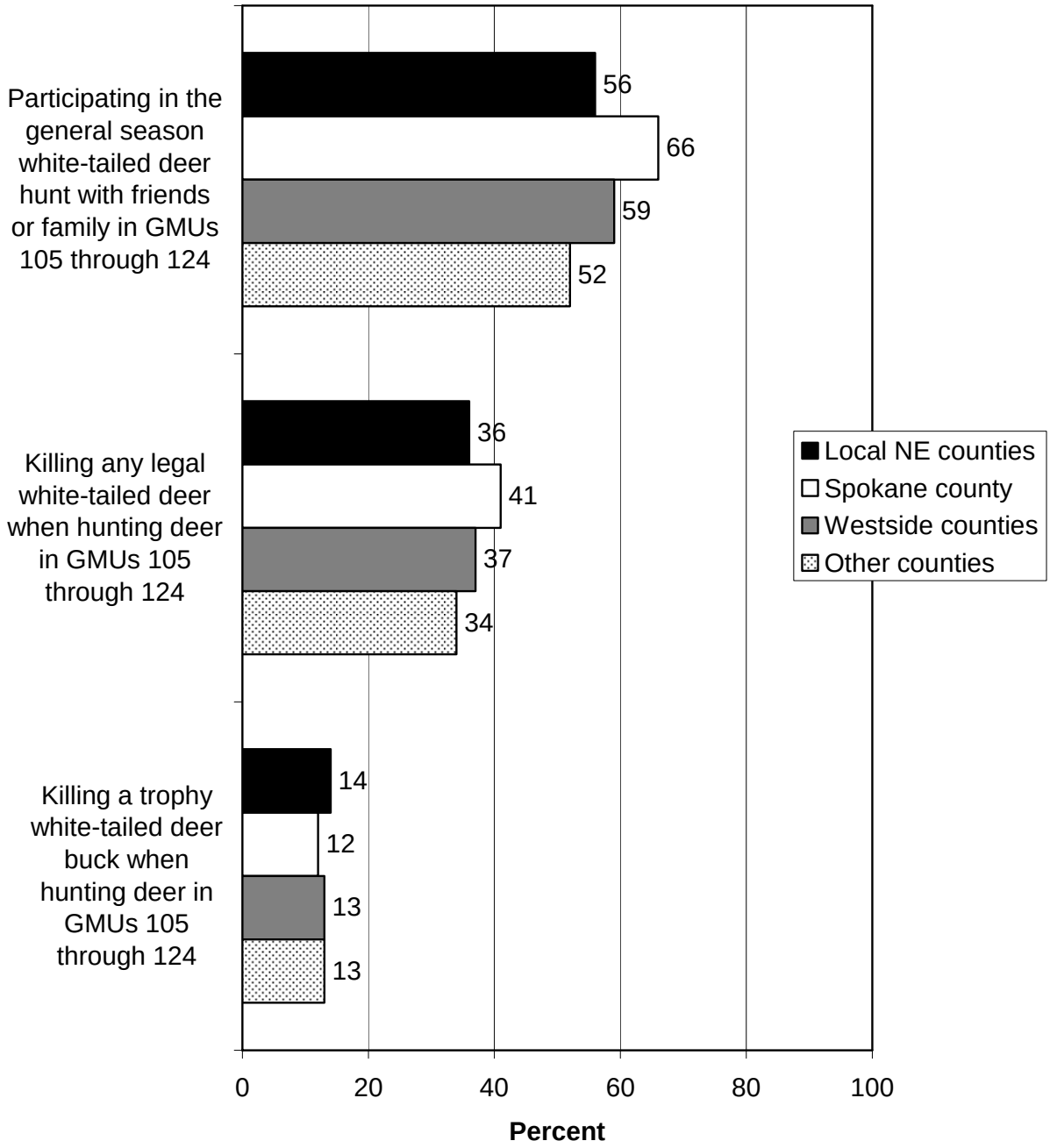
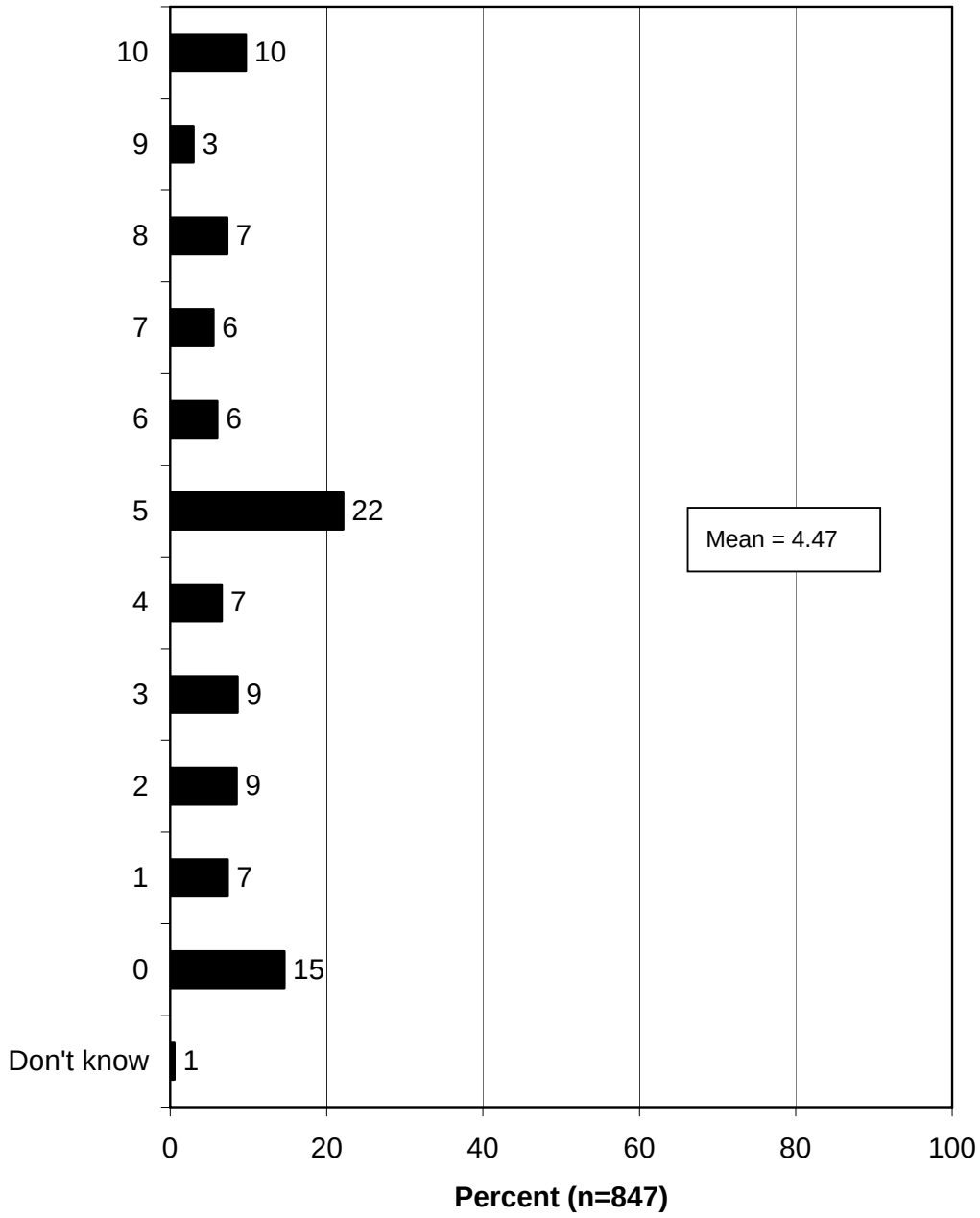


Q13. How important is killing a trophy white-tailed deer buck to you when hunting deer in GMUs 105 through 124 on a scale of 0 to 10 where 0 is not at all important and 10 is extremely important?



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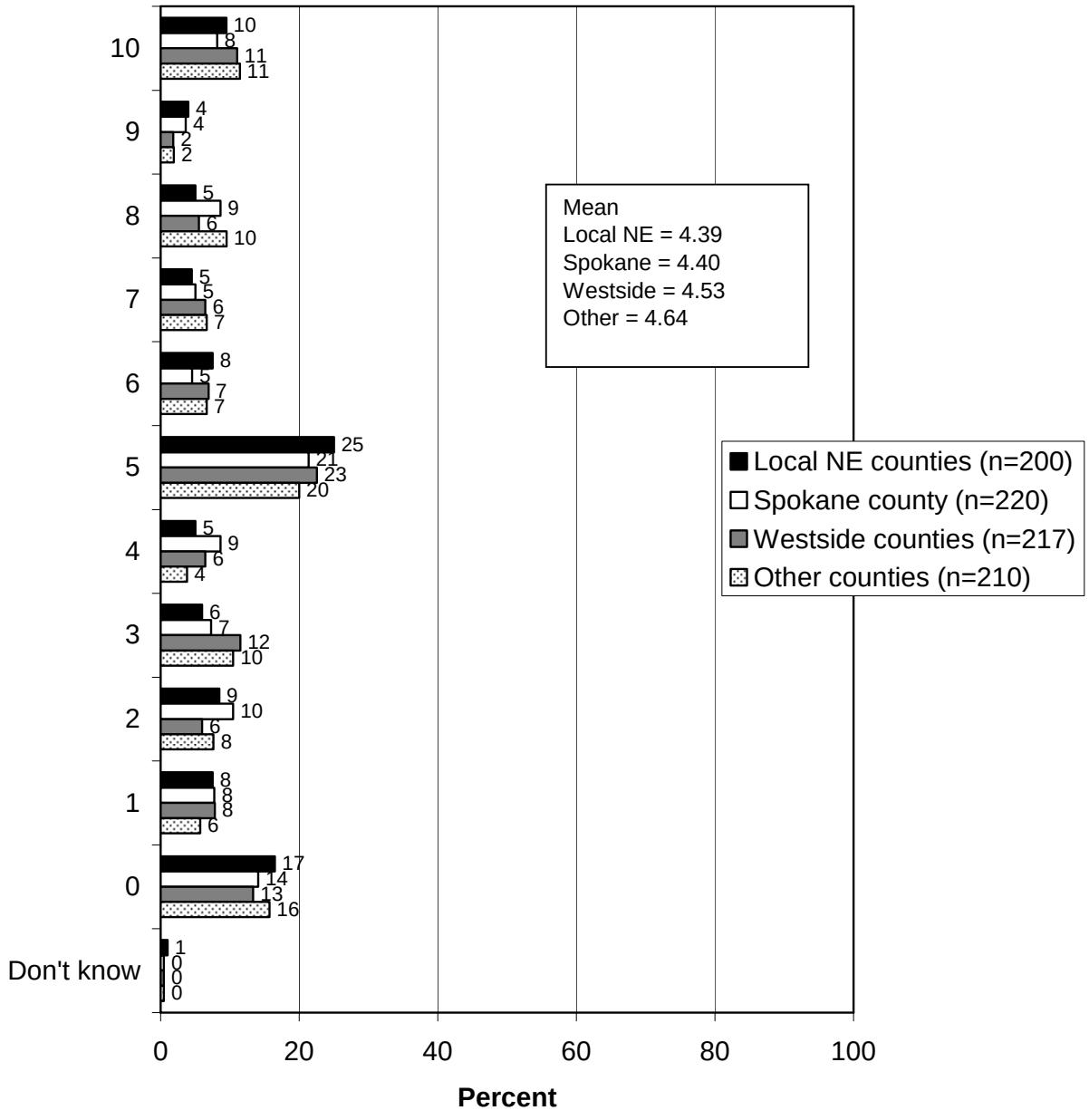
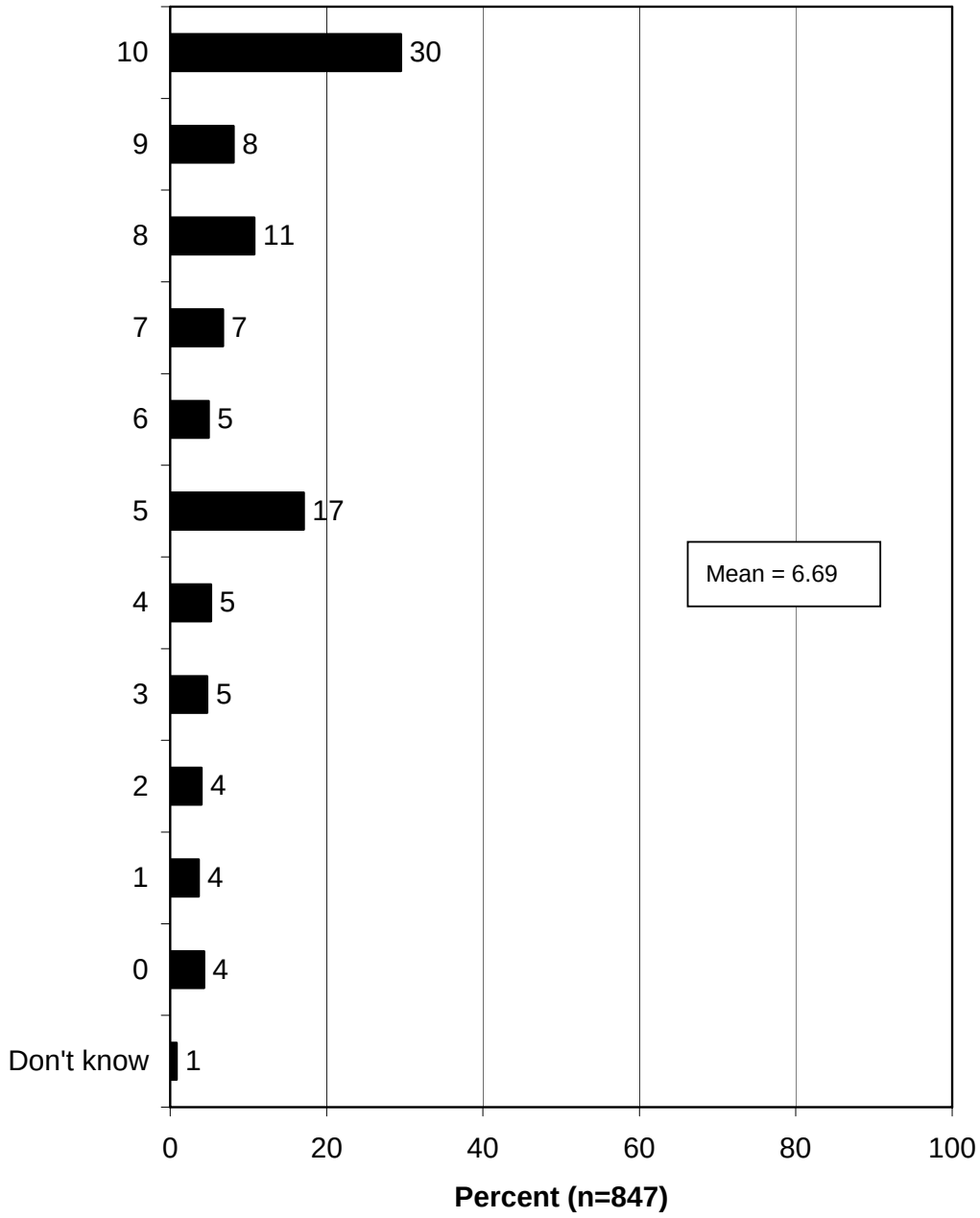
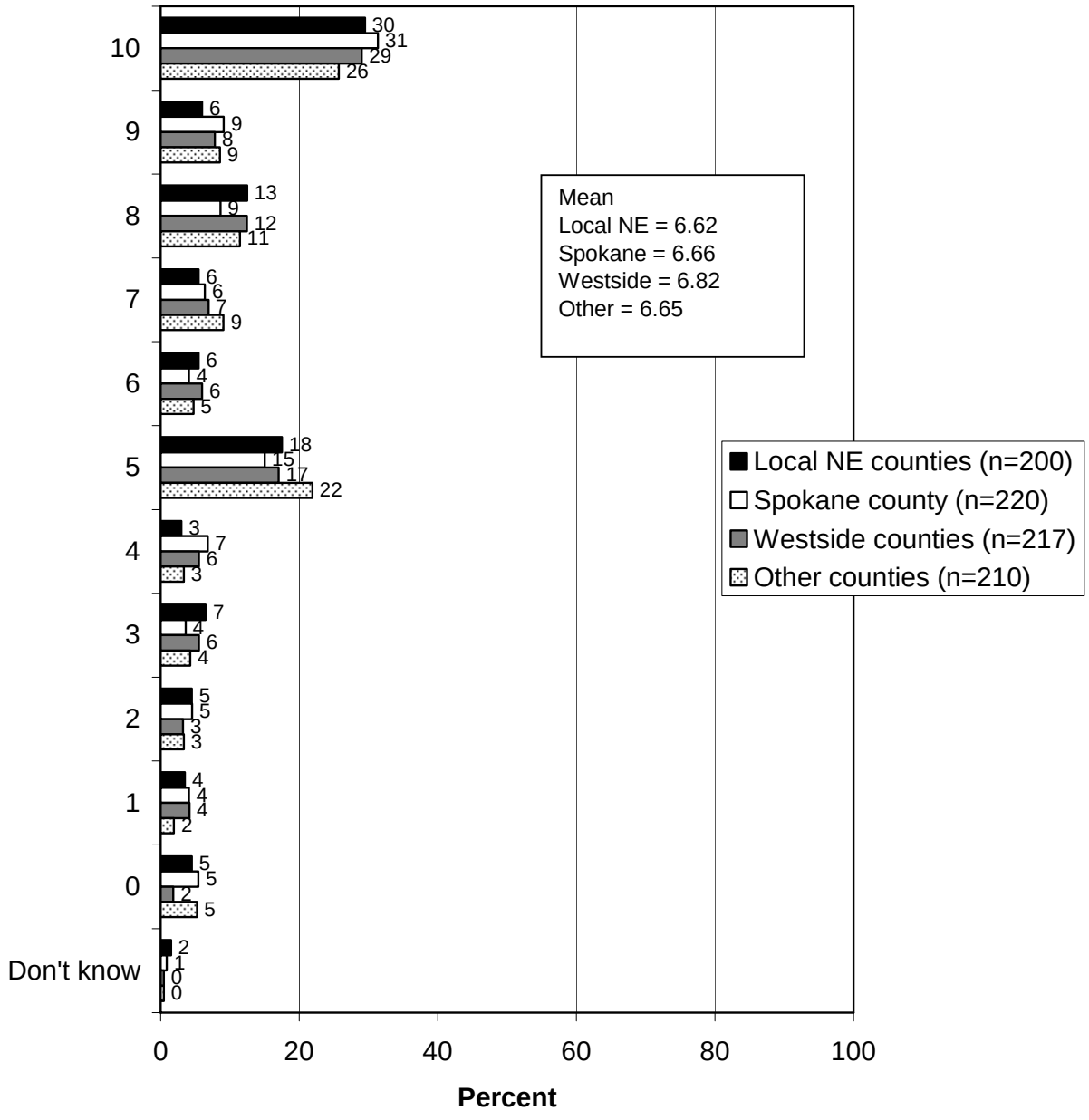


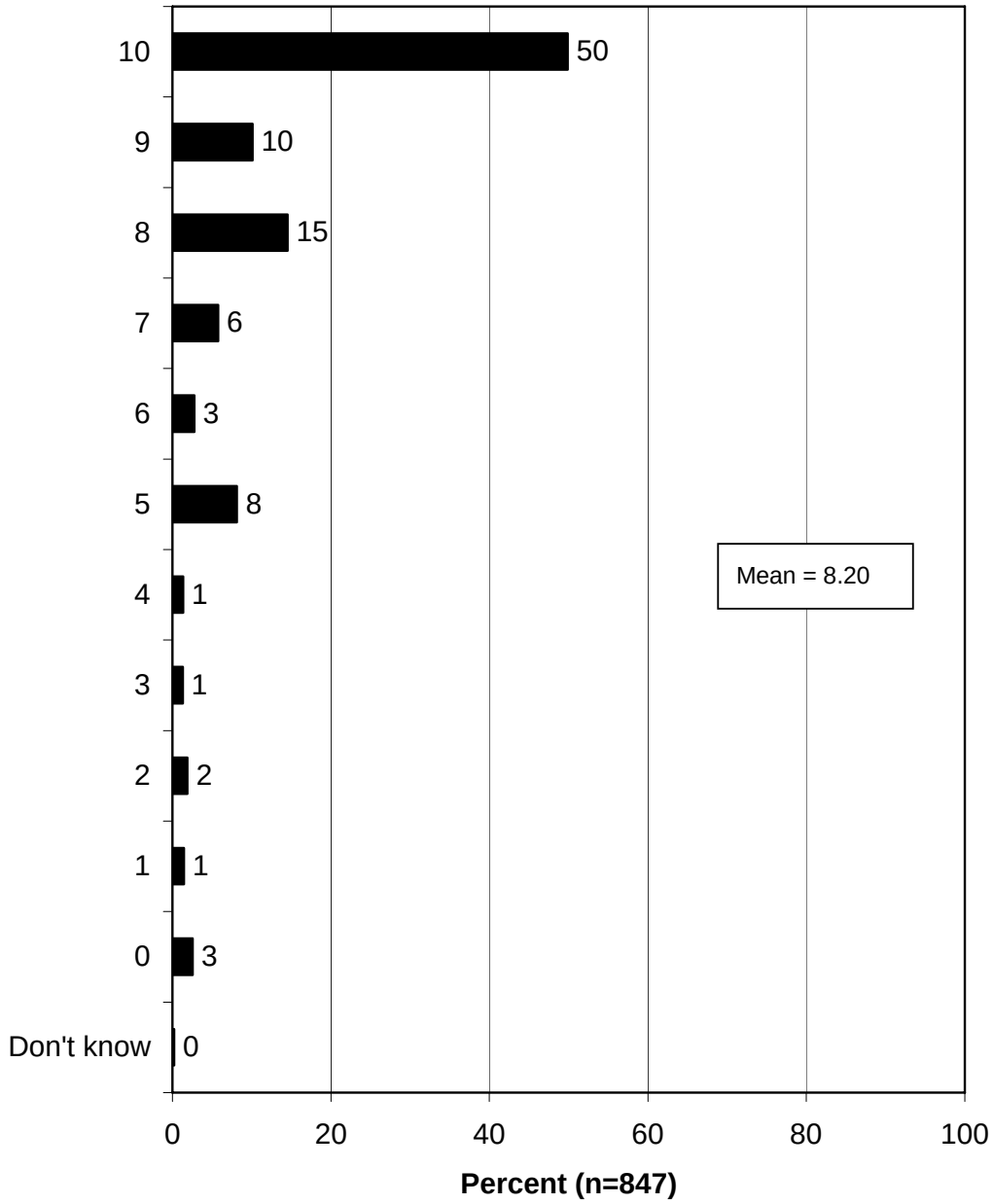
Q15. How important is killing any legal white-tailed deer to you when hunting deer in GMUs 105 through 124 on a scale of 0 to 10 where 0 is not at all important and 10 is extremely important?



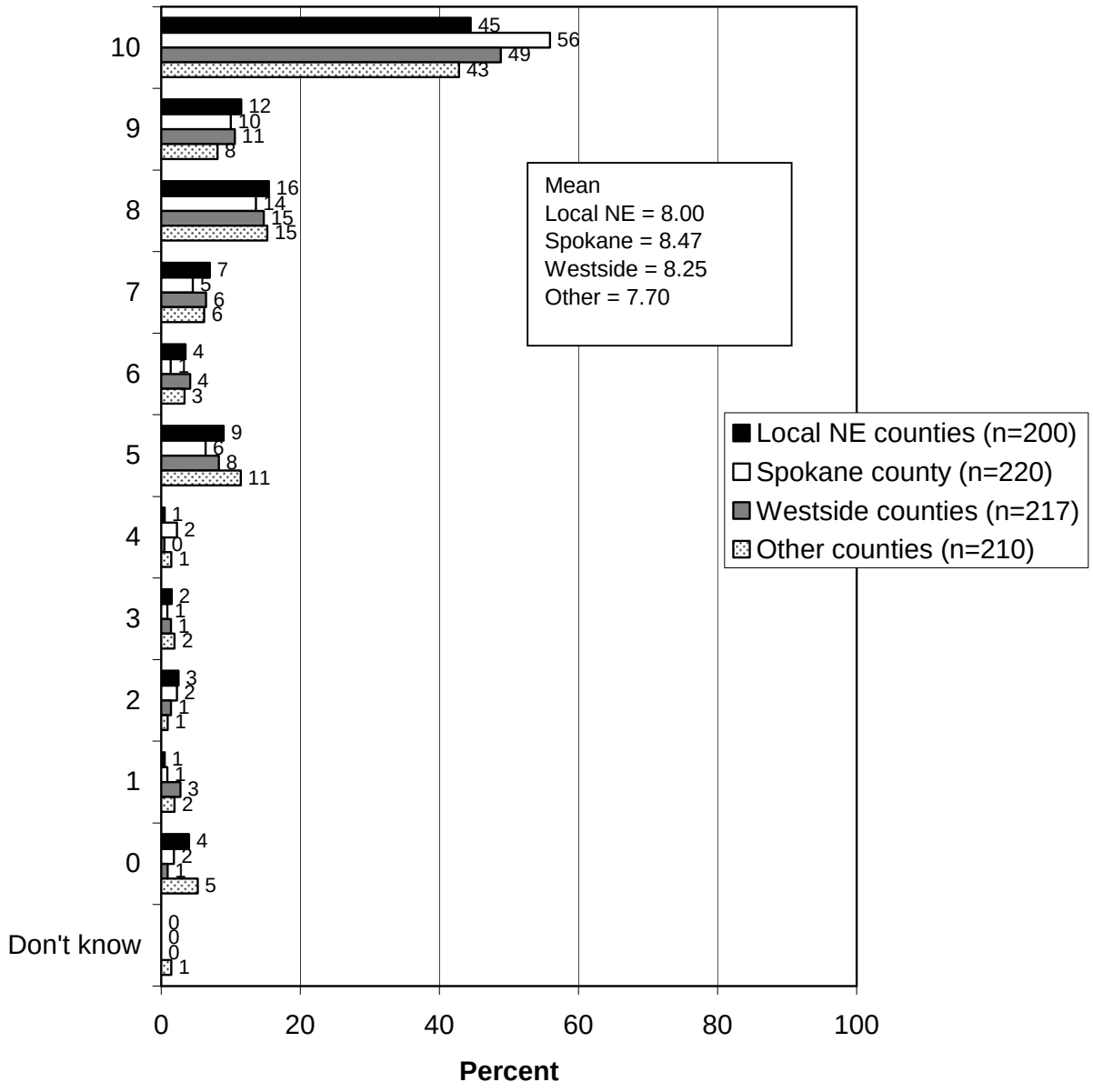
Q15. How important is killing any legal white-tailed deer to you when hunting deer in GMUs 105 through 124 on a scale of 0 to 10 where 0 is not at all important and 10 is extremely important?



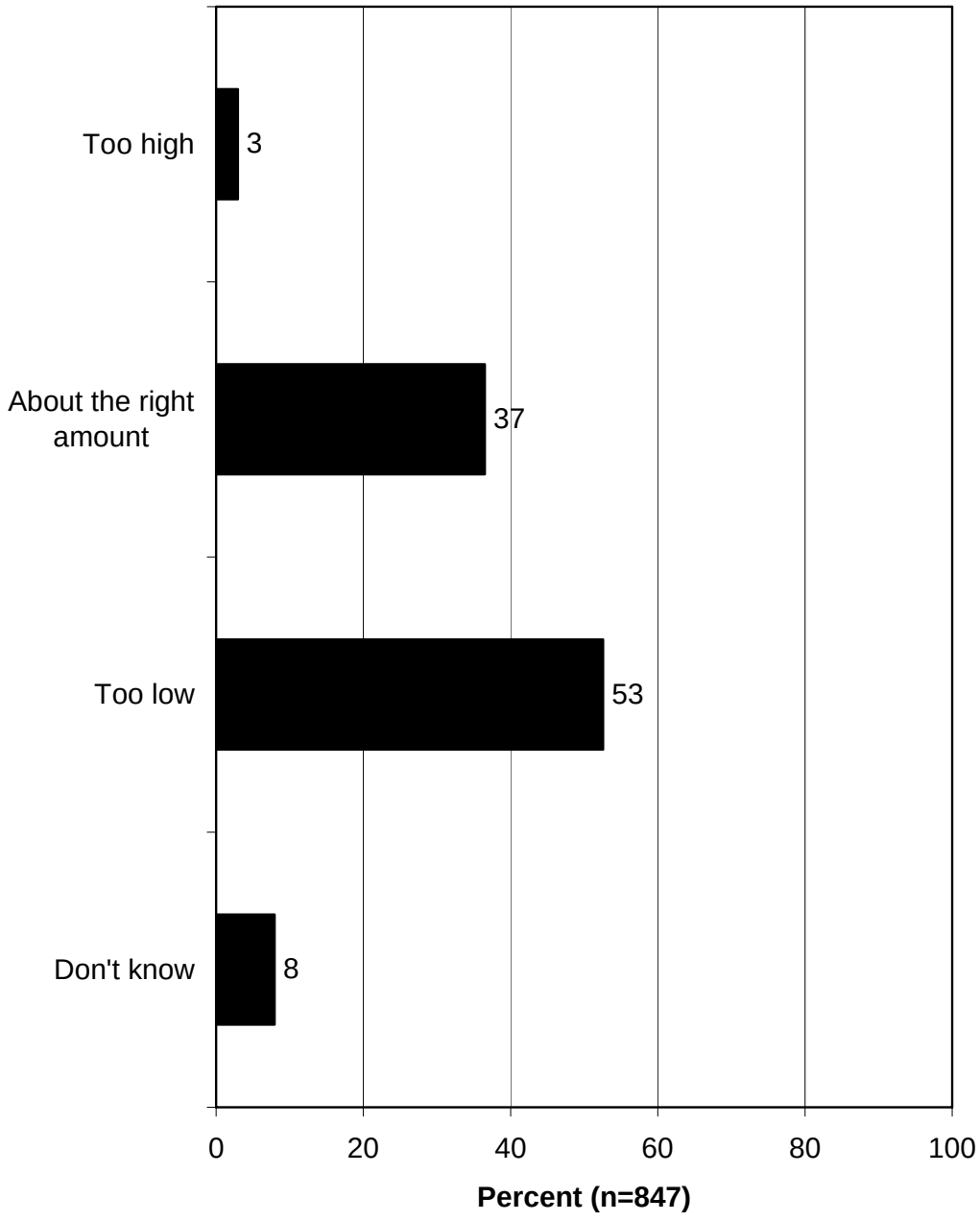
Q17. How important to you is participating in the general season white-tailed deer hunt with friends or family in GMUs 105 through 124 on a scale of 0 to 10 where 0 is not at all important and 10 is extremely important?



Q17. How important to you is participating in the general season white-tailed deer hunt with friends or family in GMUs 105 through 124 on a scale of 0 to 10 where 0 is not at all important and 10 is extremely important?



Q19. In your opinion, is the number of mature bucks in the white-tailed deer population in GMUs 105 through 124 too high, about the right amount, or too low?



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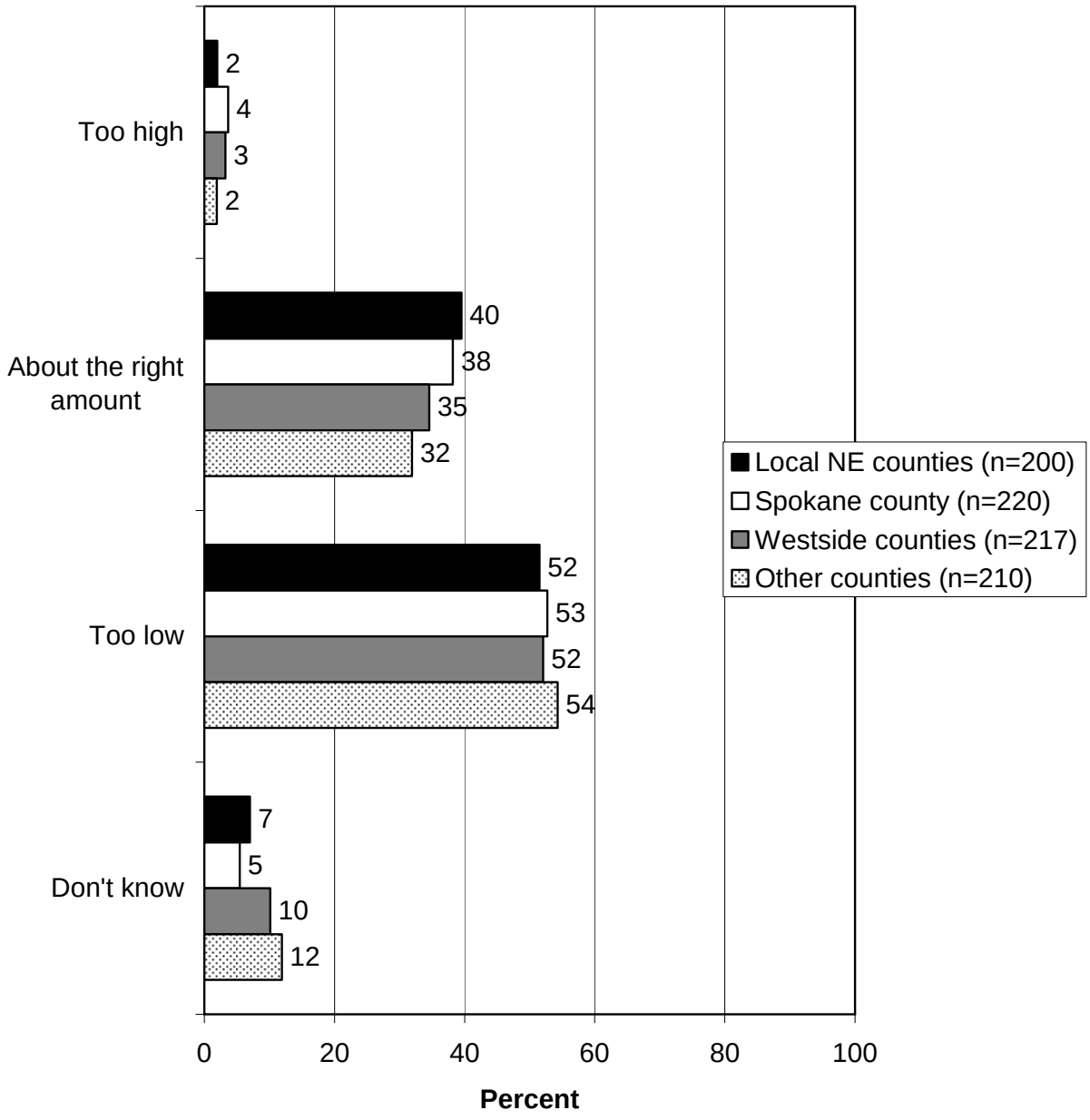
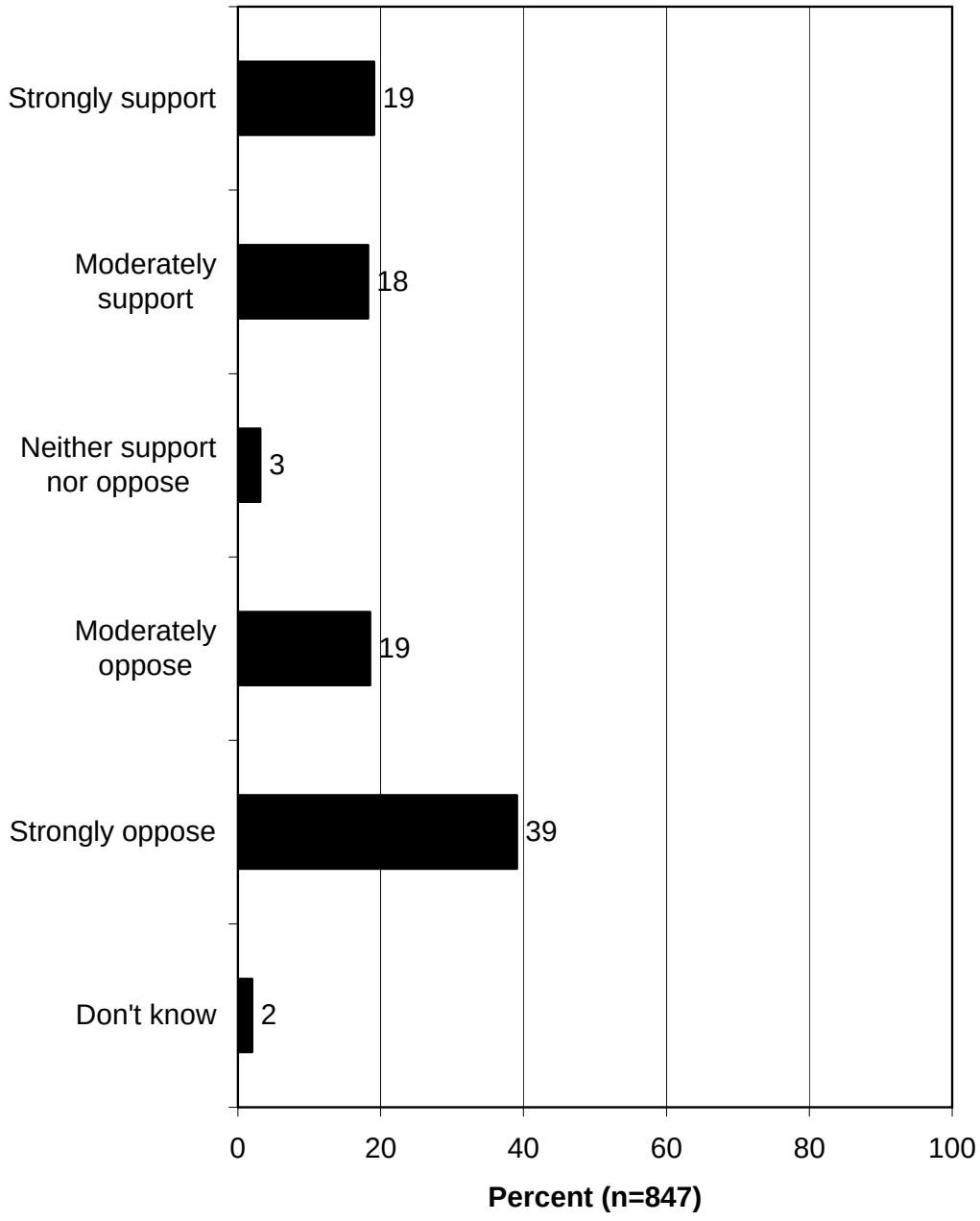
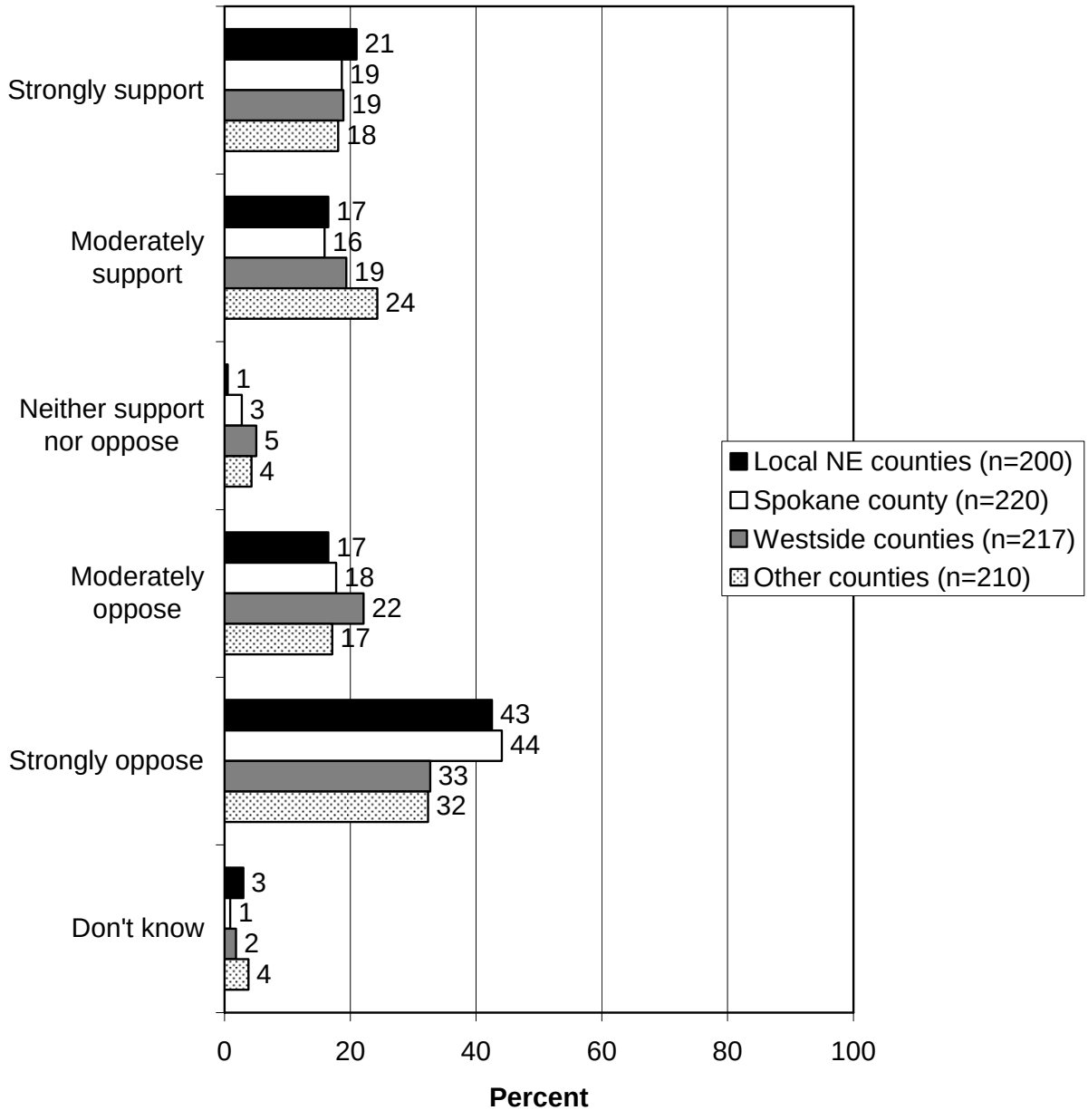


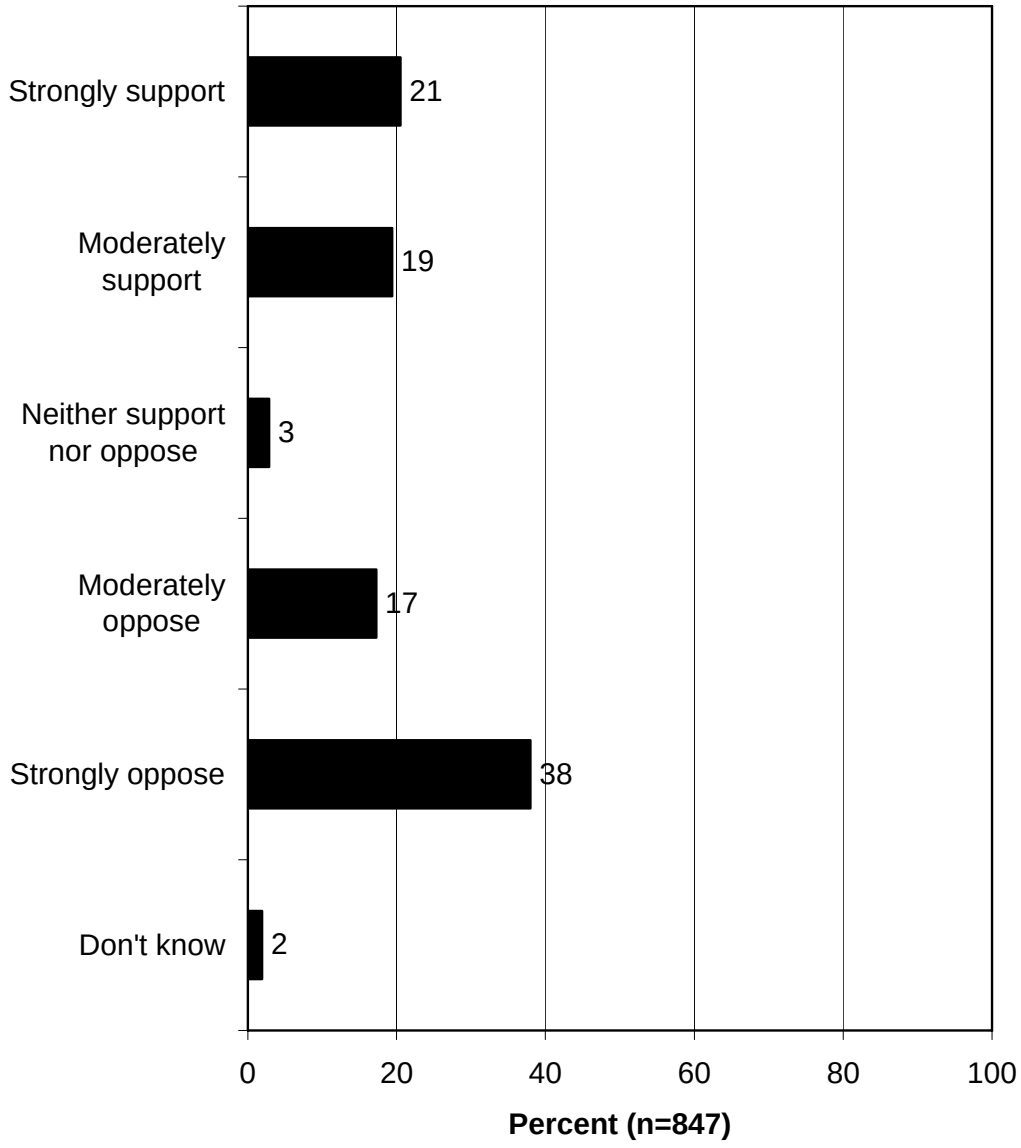
Q21. Would you support or oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side?



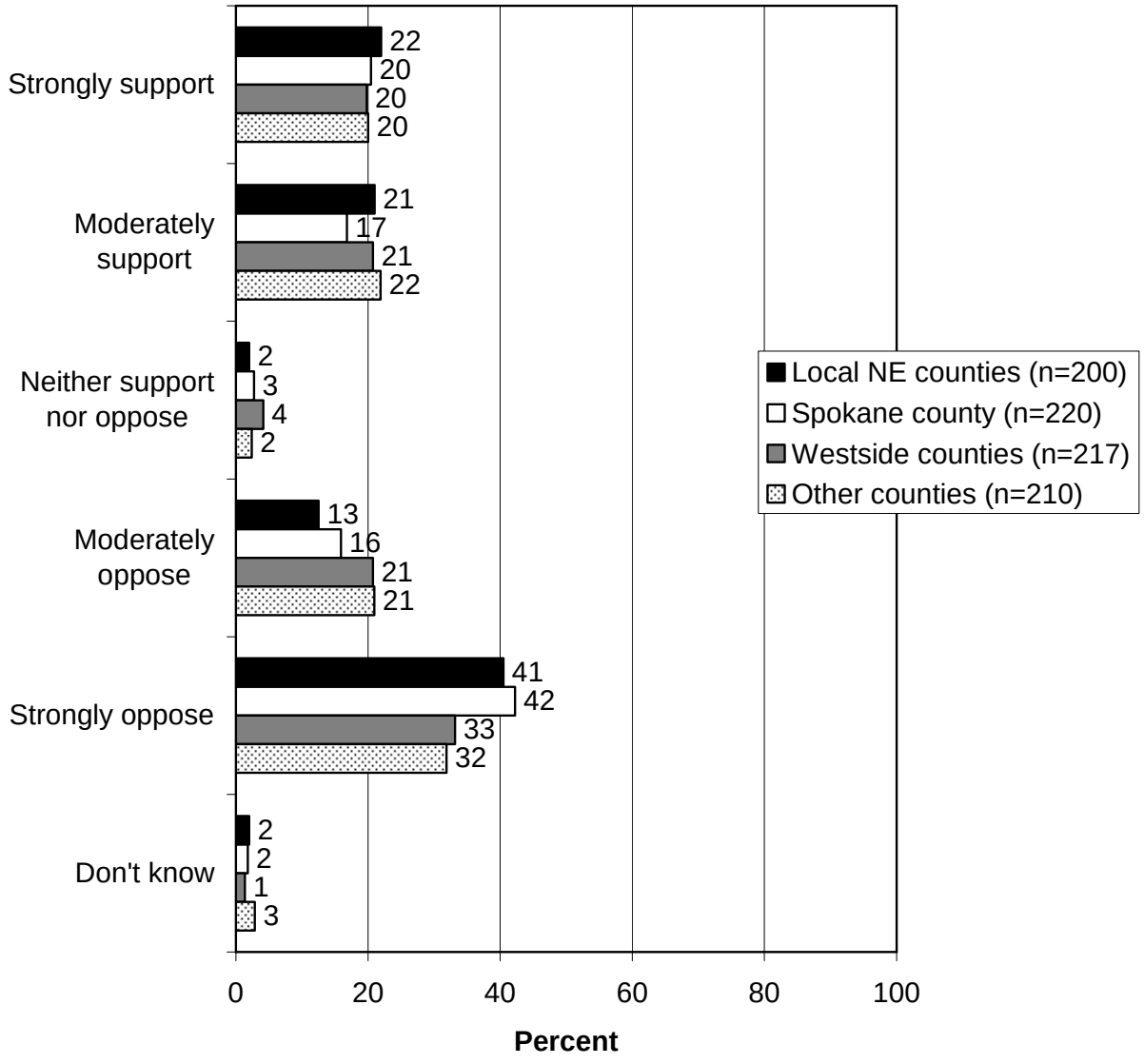
Q21. Would you support or oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side?



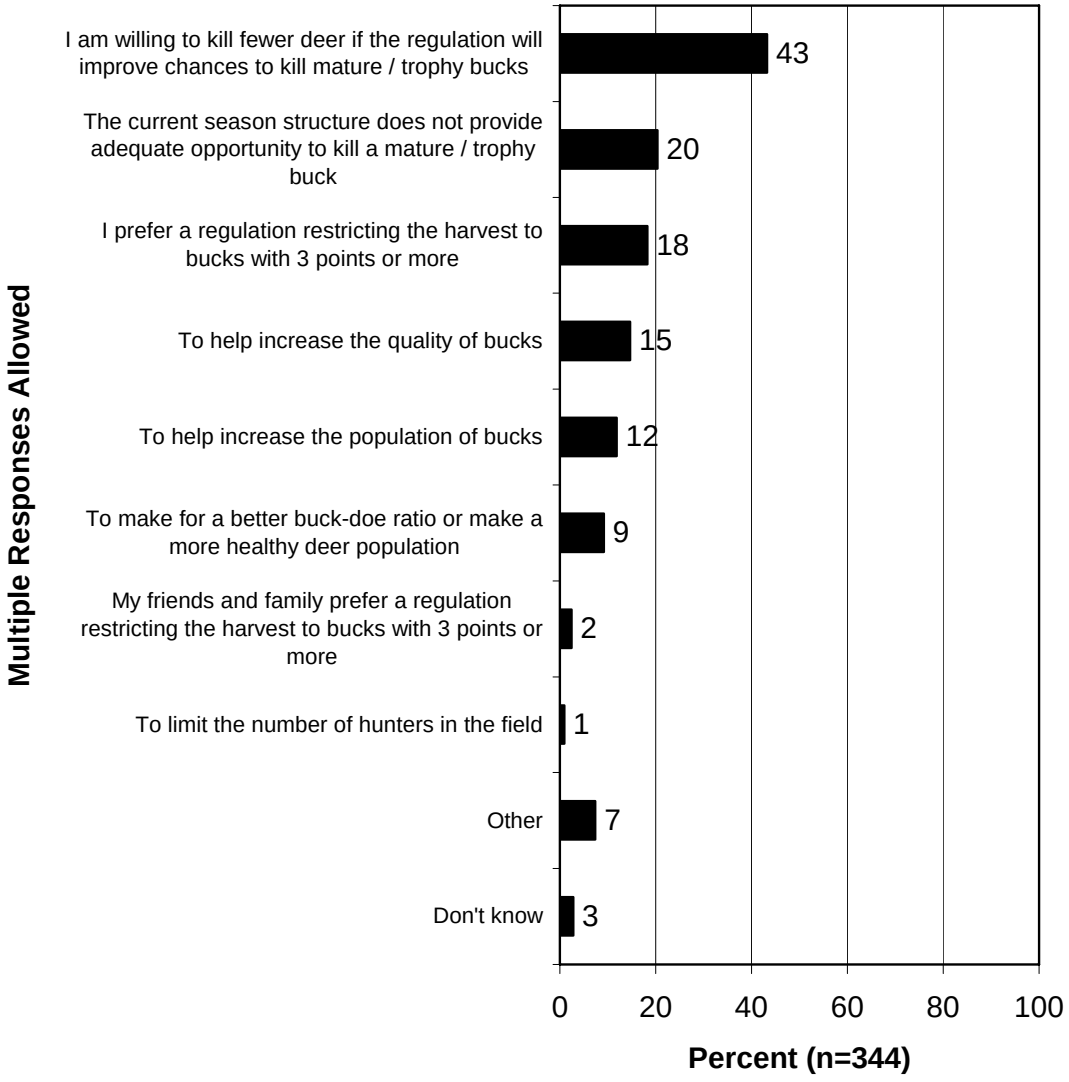
Q23. Knowing that some believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington, would you support or oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side?



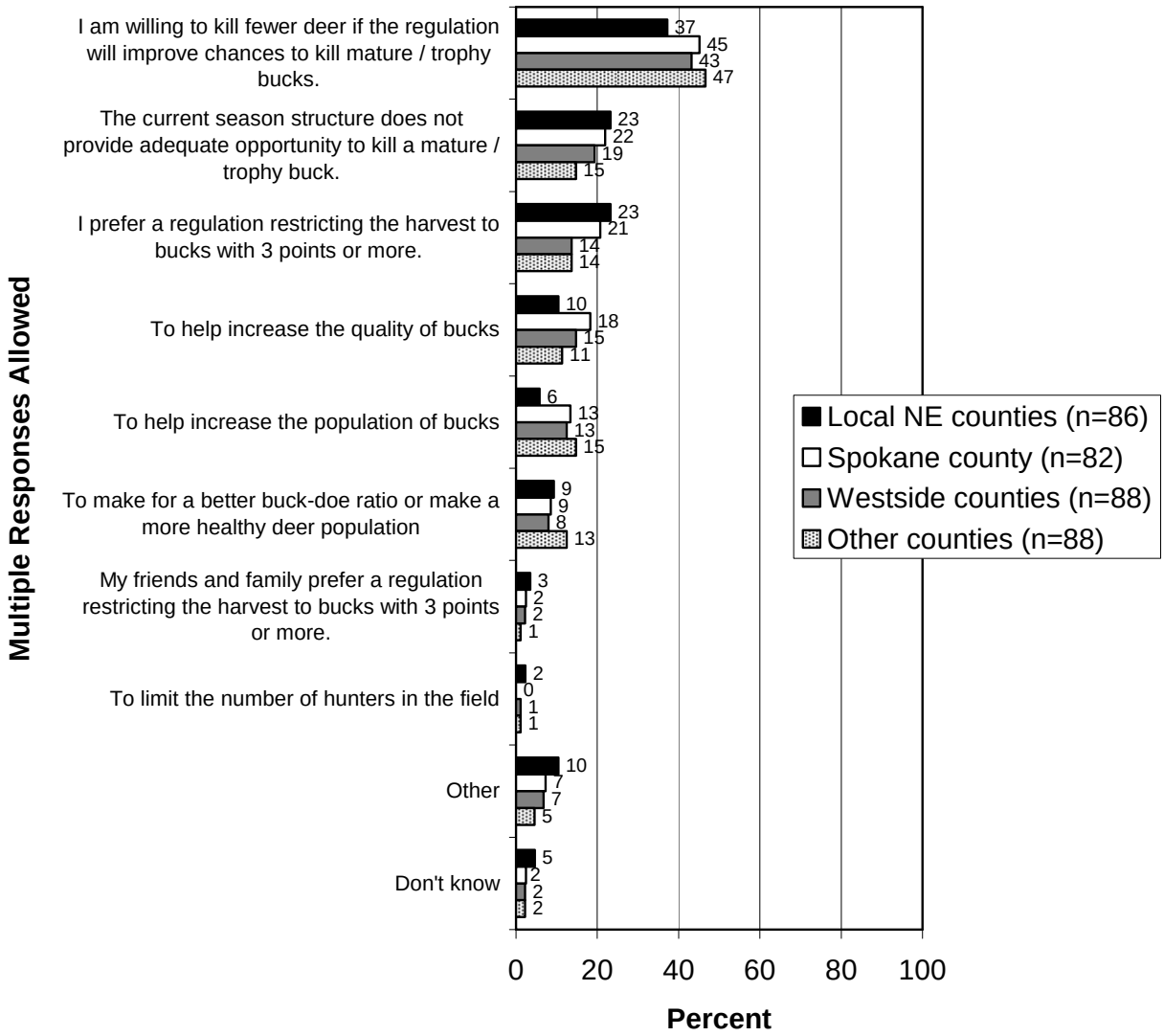
Q23. Knowing that some believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington, would you support or oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side?



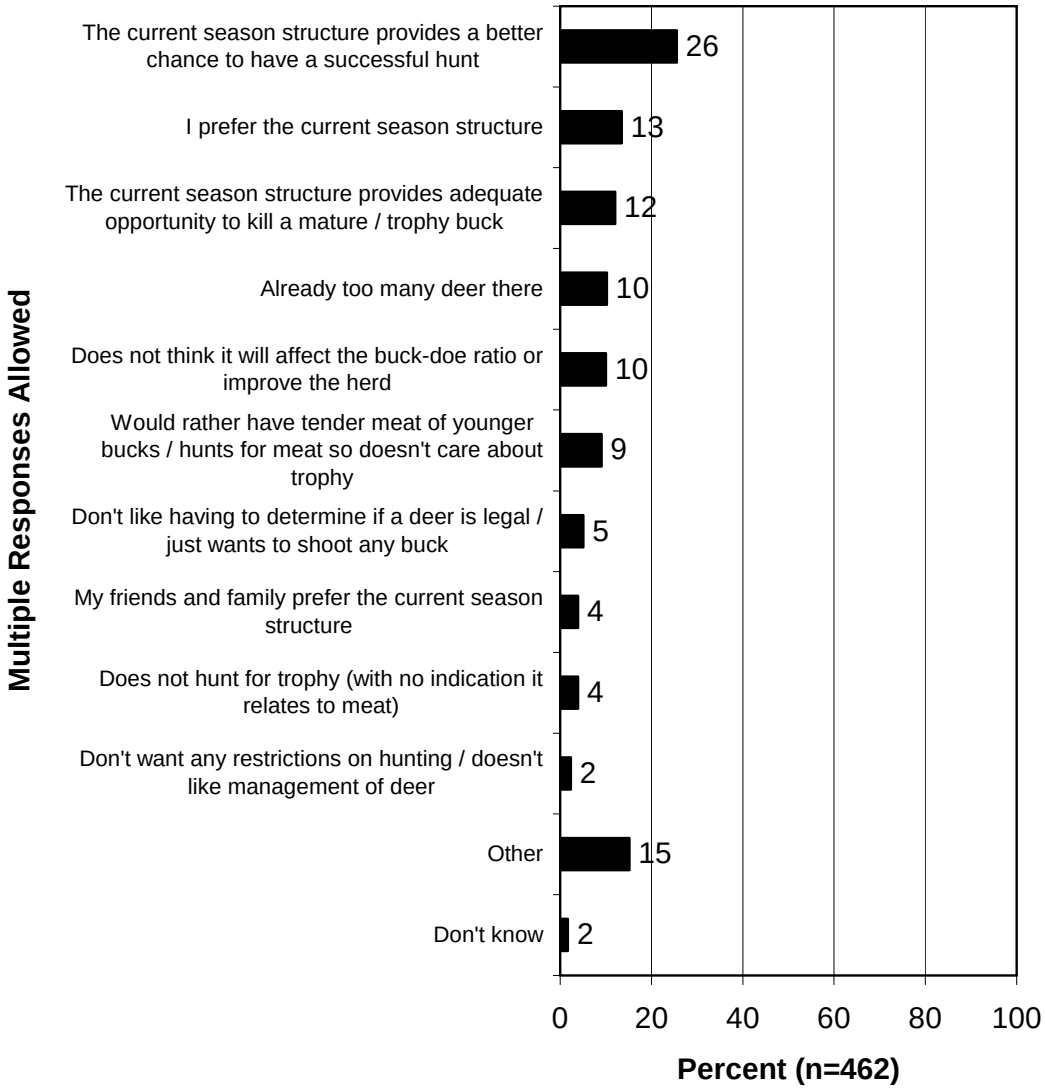
Q26. Why do you support a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side? (Asked of those who support the regulation after being informed that some biologists believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington.)



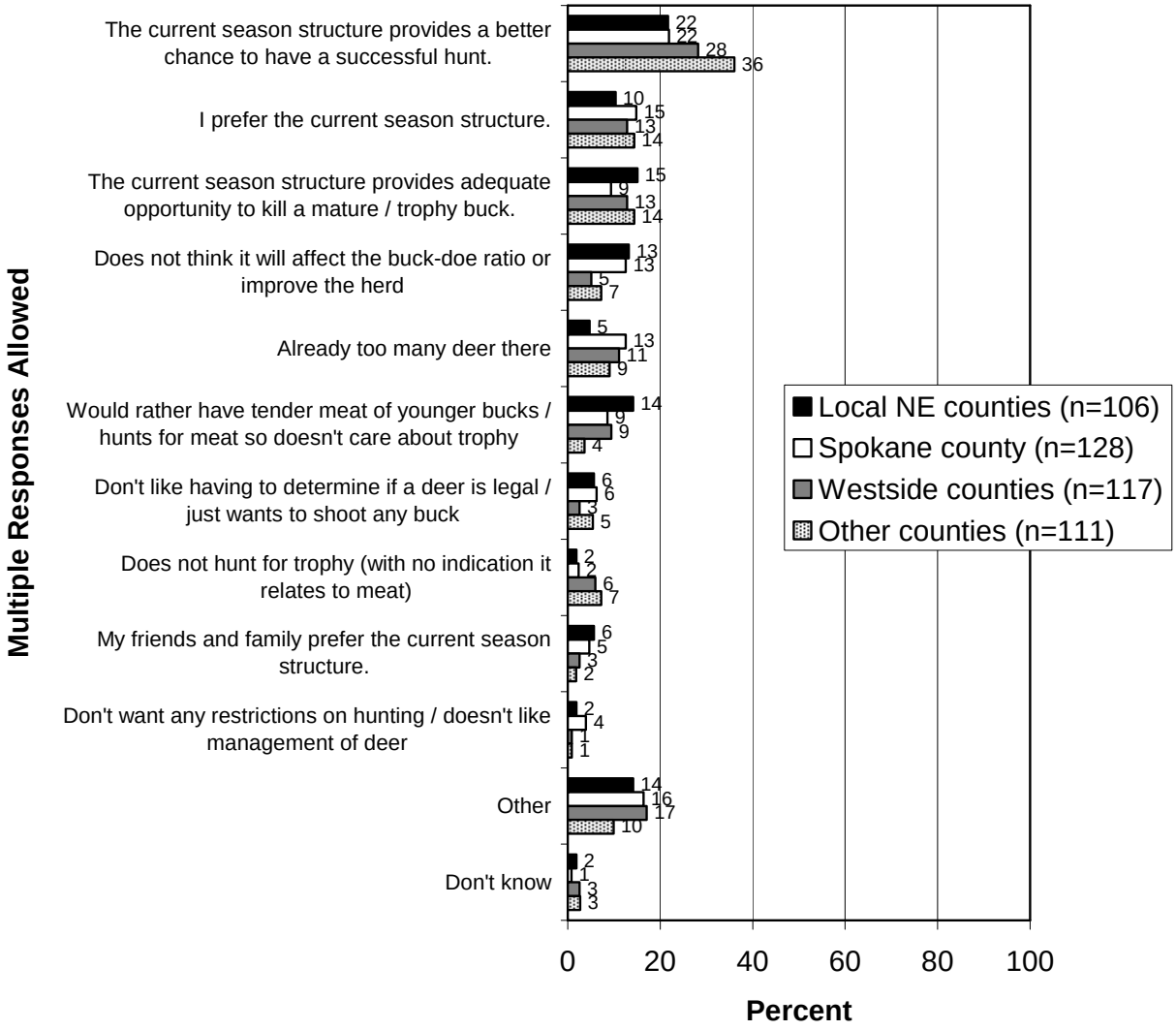
Q26. Why do you support a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side? (Asked of those who support the regulation after being informed that some biologists believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington.)



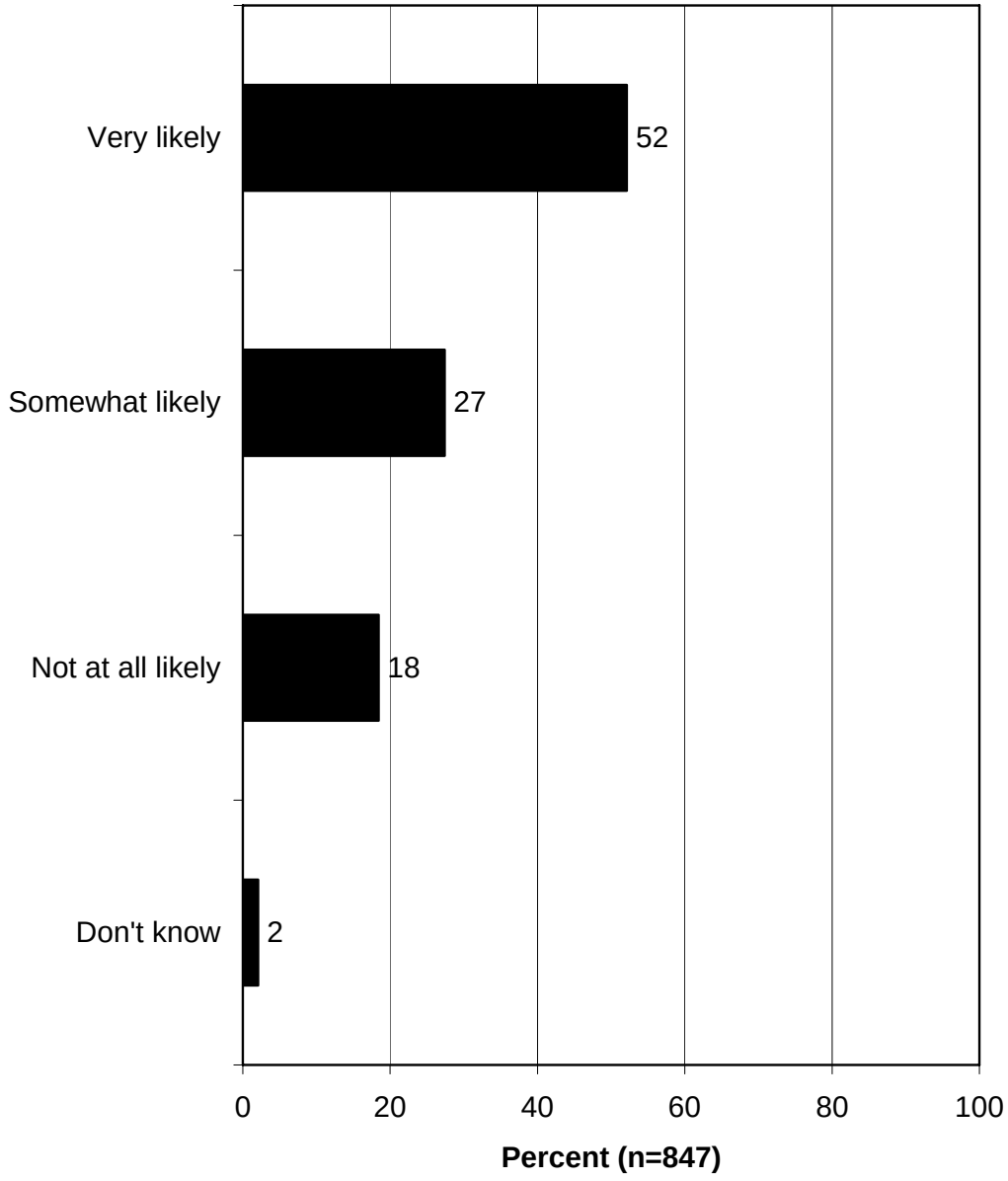
Q30. Why do you oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side? (Asked of those who oppose the regulation after being informed that some biologists believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington.)



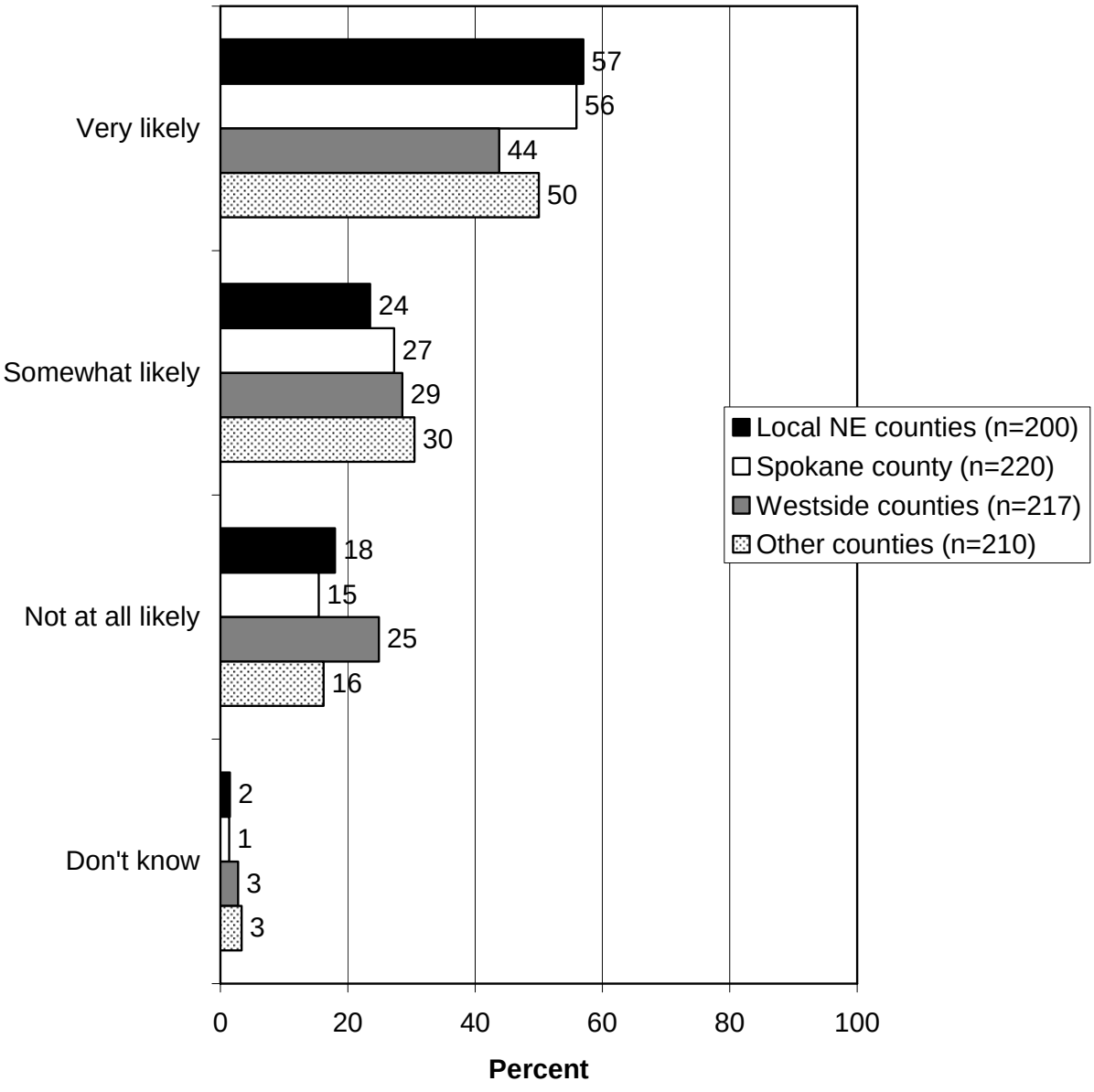
Q30. Why do you oppose a regulation for GMUs 105 through 124 that allows the harvest of white-tailed deer bucks only if the buck has 3 antler points or more on at least one side? (Asked of those who oppose the regulation after being informed that some biologists believe that an antler restriction for white-tailed deer would increase the number of trophy bucks in the population in northeastern Washington.)



Q32. If a regulation that allows the harvest of white-tailed bucks only if the buck has 3 antler points or more on at least one side in GMUs 105 through 124 was implemented, how likely would you be to hunt deer in GMUs 105 through 124?



Q32. If a regulation that allows the harvest of white-tailed bucks only if the buck has 3 antler points or more on at least one side in GMUs 105 through 124 was implemented, how likely would you be to hunt deer in GMUs 105 through 124?



OPINIONS ON ELK HUNTING AND MANAGEMENT OF THE COLOCKUM ELK HERD

- This section of the report concerns the Colockum elk herd, which consists of those elk within the boundaries identified in the Department's *Colockum Elk Herd Management Plan*. This area includes, but is not limited to, GMUs 249 (Alpine), 251 (Mission), 328 (Naneum), 329 (Quilomene), and 335 (Teanaway).

- Before the survey asked any questions about the Colockum elk herd, the survey informed elk hunters that the Department manages the Colockum elk herd for both hunting opportunities and the health of the herd itself. Respondents were also informed that in recent years the Colockum elk herd has consistently been below post-hunt population objectives for bulls, and that Department biologists believe a cause of this is low yearling bull survival. Respondents then had two options explained to them for addressing the problem. One option is to change the description of a legal bull elk for harvest during the general hunting season. The other option is to allow only special permit hunting for all bull elk.

- After the above options were explained, elk hunters were asked to choose between the two options (as well as a third option that is a combination of the first two options; additionally, respondents could choose the "other" answer if none of the options appealed to them and give their own option). The options as explained in detail in this question were as follows:
  - Option A: Change the legal bull elk description for the general hunting season to one-by-one spike bulls only for the Colockum elk herd. Spike bull elk with antlers that fork or branch would *not* be legal to kill.
  - Option B: Change bull elk hunting from general season bull hunting to special permit bull elk hunting only for the Colockum elk herd. All bull elk would be legal to kill for hunters with special permits only. No general season bull elk hunting would be allowed for Colockum elk.
  - Option C: A combination of both options with some GMUs for the Colockum elk herd open for hunting one-by-one spikes only during general season and hunting branch-

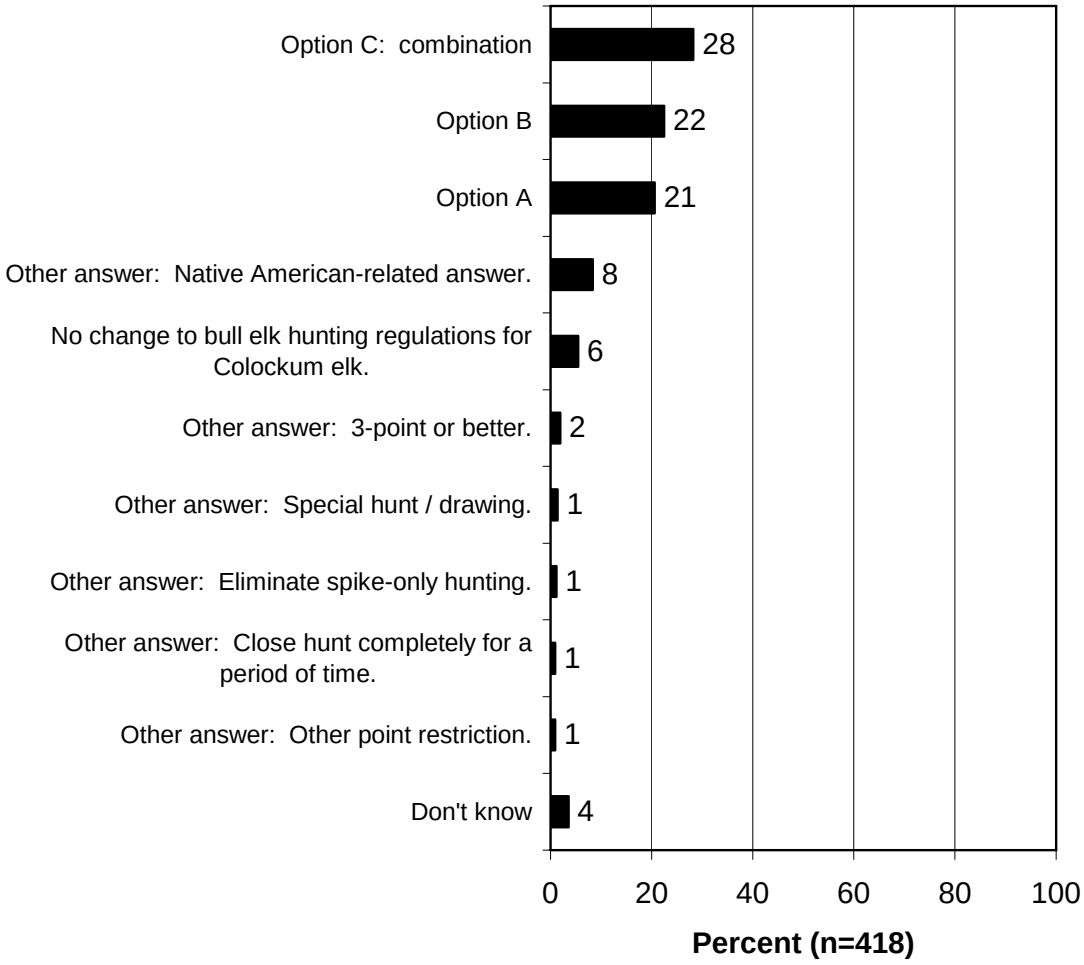
antlered bulls by special permit only, and some GMUs open for all bull elk hunting by special permit only.

- The combination (Option C) was the most popular option (28% gave that answer). Meanwhile, Options A and B had nearly equal support (21% and 22%, respectively). Note that those who chose an "other" option most commonly gave an answer related to native Americans.

- Those elk hunters who chose either option B or C were asked in follow-up to indicate which GMUs for Colockum elk should be for special permit only bull elk hunting. The leading answers, in order, are GMU 328 (Naneum) (45%), GMU 329 (Quilomene) (36%), GMU 335 (Teanaway) (34%), GMU 251 (Mission) (31%), and GMU 249 (Alpine) (24%).

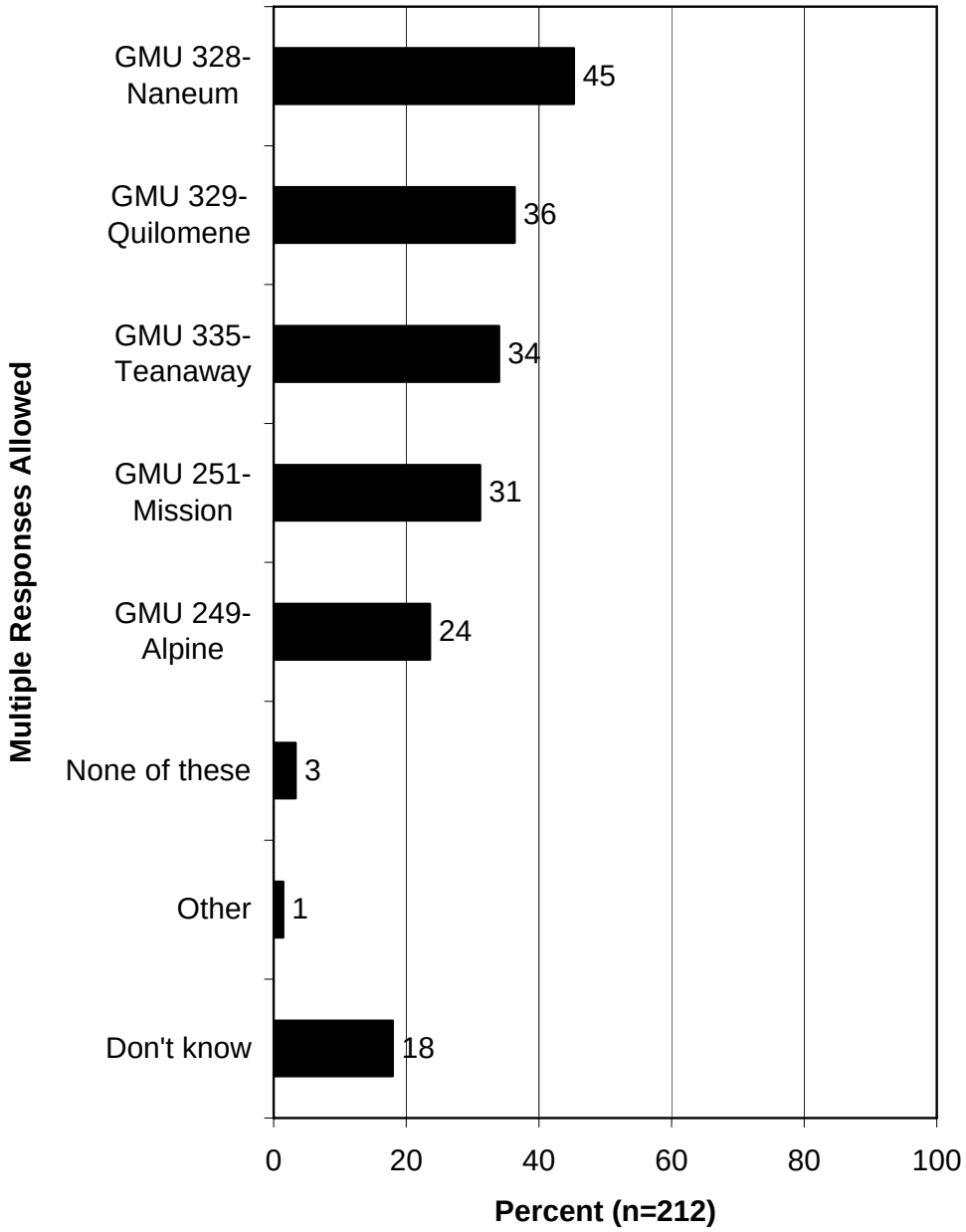
- Elk hunters were asked to indicate the likely effects on their elk hunting if the Department were to designate one or two GMUs for Colockum elk as special permit only for bull elk hunting. The answer set had four choices: continue to hunt Colockum elk, but only in the general season GMUs; continue to hunt Colockum elk, but only when a special permit was drawn; continue to hunt Colockum elk in both the general season GMUs and in special permit GMUs when a permit was drawn; or *not* hunt Colockum elk at all but hunt a different elk herd in Washington.
  - The most common response was that the hunter would continue to hunt Colockum elk in both the general season GMUs and in special permit GMUs when a permit was drawn (27%), but two other responses had more than 20%: the hunter would *not* hunt Colockum elk at all but hunt a different elk herd in Washington (23%) or the hunter would continue to hunt Colockum elk, but only when a special permit was drawn (22%).
  - In follow-up, those who indicated that they would hunt a different elk herd in Washington were asked to name which herd they would hunt and in which GMU they would hunt elk. Most commonly, they would hunt the Yakima herd (the leading answer by far), and most commonly they would hunt in GMUs 335 and 328.

Q13. If the Department were to make a change to elk hunting regulations for the Colockum elk herd in an effort to improve yearling bull elk survival rates, which of the following changes would you prefer?

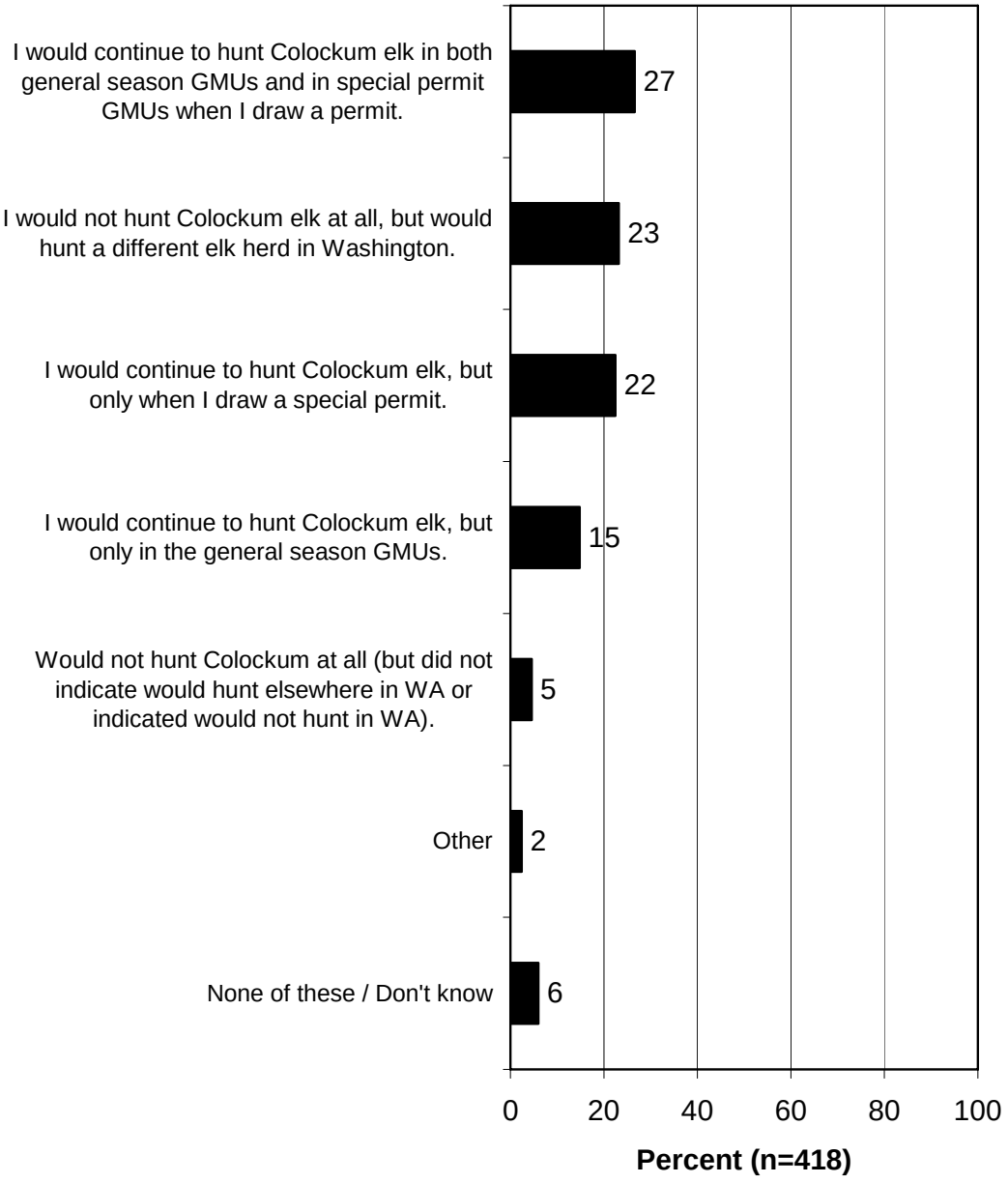


Option A: Change the legal bull elk description for the general hunting season to one-by-one spike bulls only for the Colockum elk herd. Spike bull elk with antlers that fork or branch would not be legal to kill.
Option B: Change bull elk hunting from general season bull hunting to special permit bull elk hunting only for the Colockum elk herd. All bull elk would be legal to kill for hunters with special permits only. No general season bull elk hunting would be allowed for Colockum elk.
Option C: A combination of both options with some Game Management Units for the Colockum elk herd open for hunting one-by-one spikes only during general season and hunting branch-antlered bulls by special permit only, and some GMUs open for all bull elk hunting by special permit only.

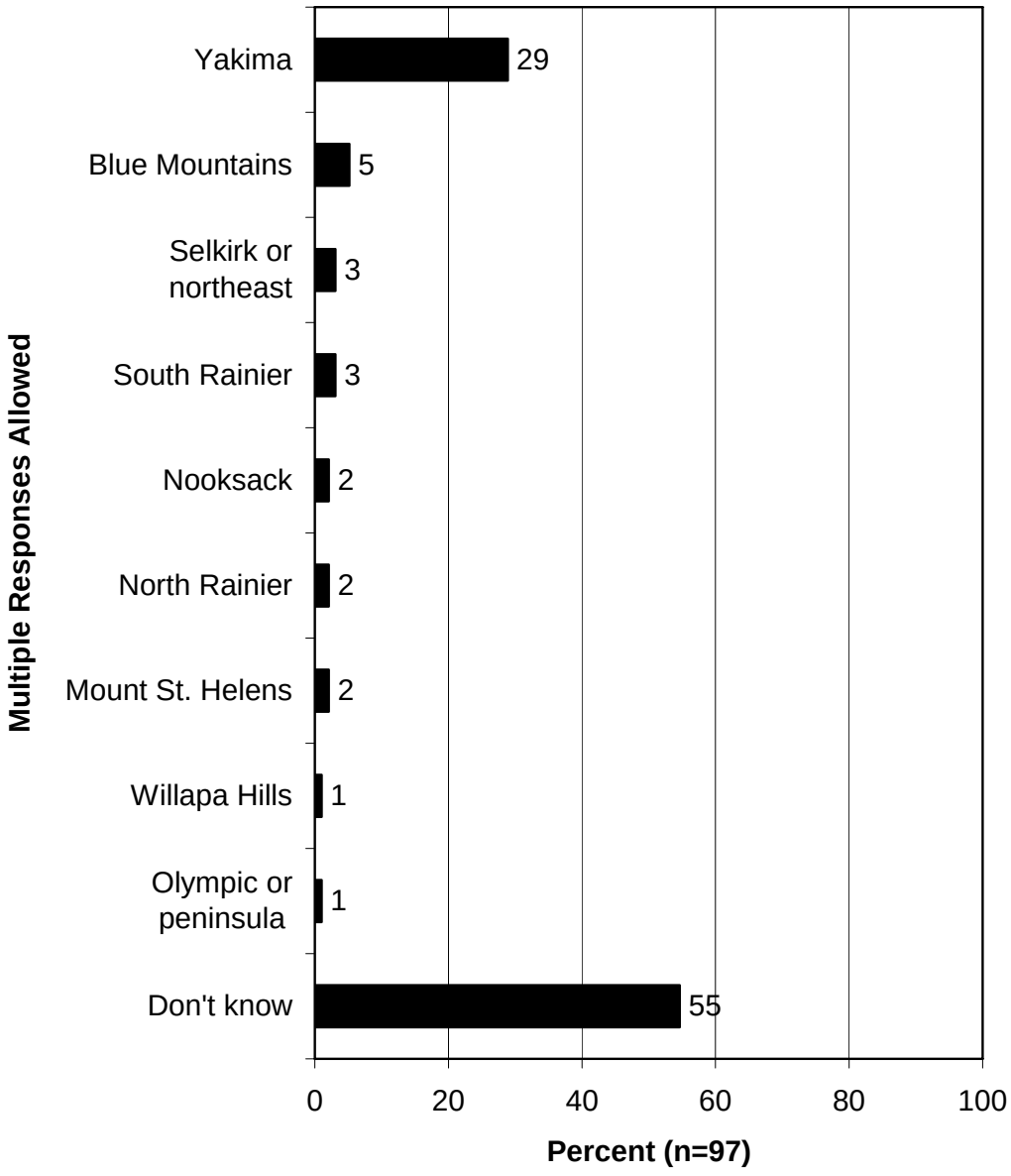
Q17. Which of the following Game Management Units for Colockum elk do you think should be special permit only bull elk hunting areas? (Asked of those who prefer the option to allow only special permit hunting for all bull elk to improve yearling bull survival rates in the Colockum elk herd.)



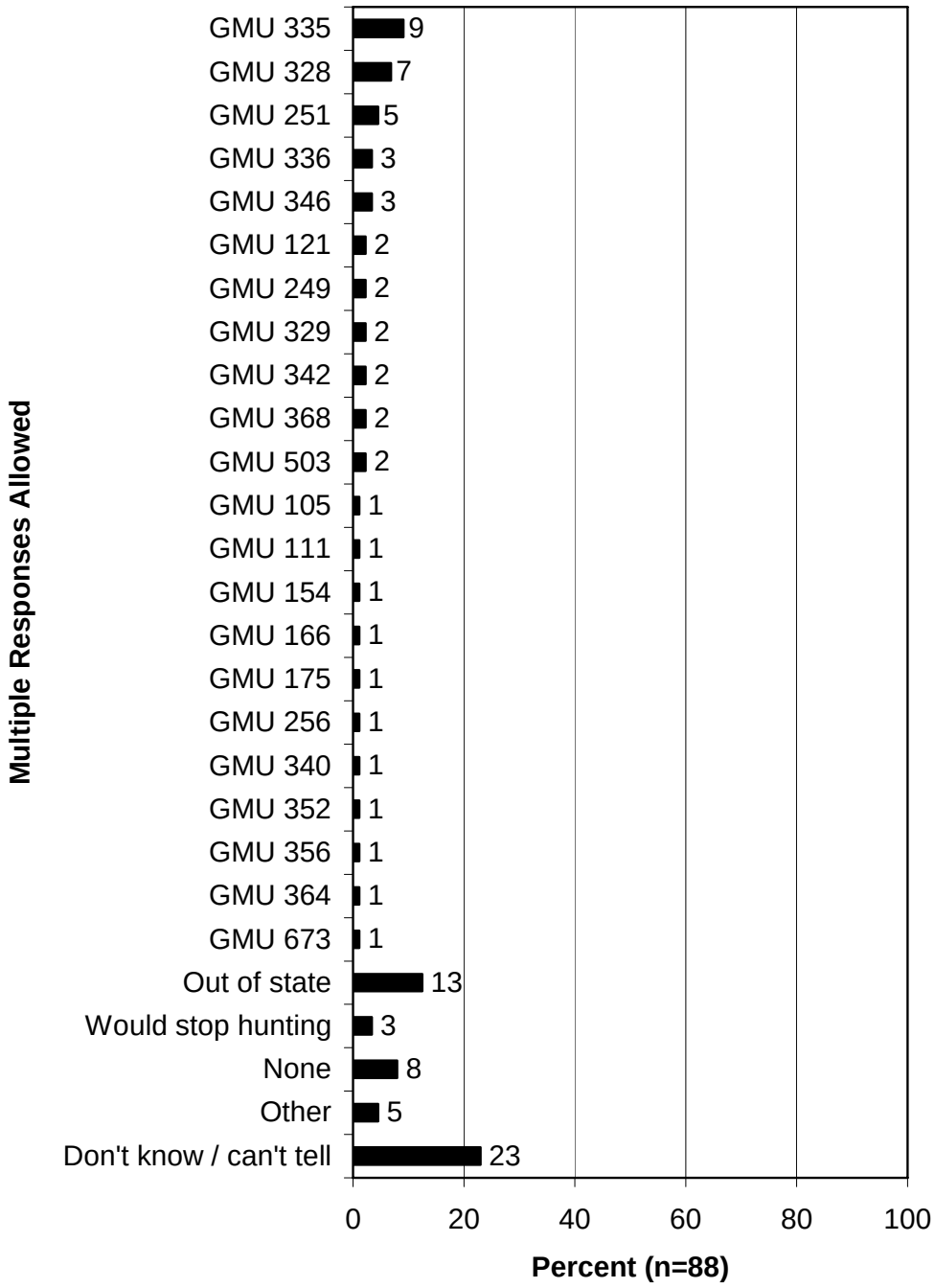
Q19. If the Department did designate one or two GMUs for Colockum elk as special permit only for bull elk hunting, which of the following statements would best describe the effect the special permit only designation would have on your elk hunting for Colockum elk?



Q23. Which elk herd would you hunt? (Asked of those who would not hunt Colockum elk at all, but would hunt a different elk herd in Washington if the Department did designate one or two GMUs for Colockum elk as special permit only for bull elk hunting.)



Q24. In which GMU would you hunt elk?



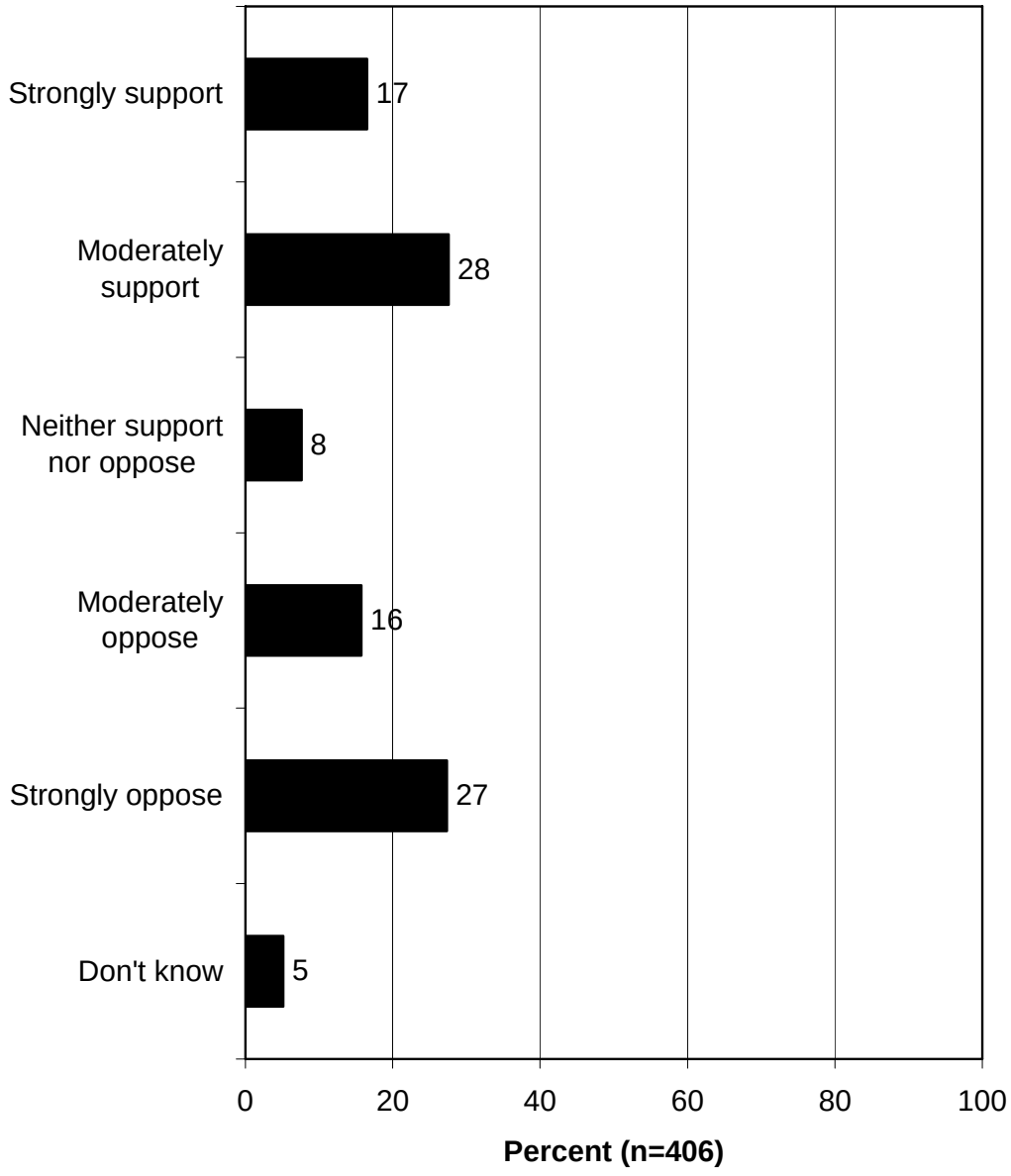
OPINIONS ON NON-LEAD SHOT REGULATIONS

- For this survey, small game hunters who had hunted wild turkey, mourning dove, band-tailed pigeon, forest grouse, chukar, partridge (gray or Hungarian), pheasant, or quail (California, valley, northern bobwhite, or mountain) in the last 3 years were interviewed. Hereinafter, they are referred to as bird hunters.

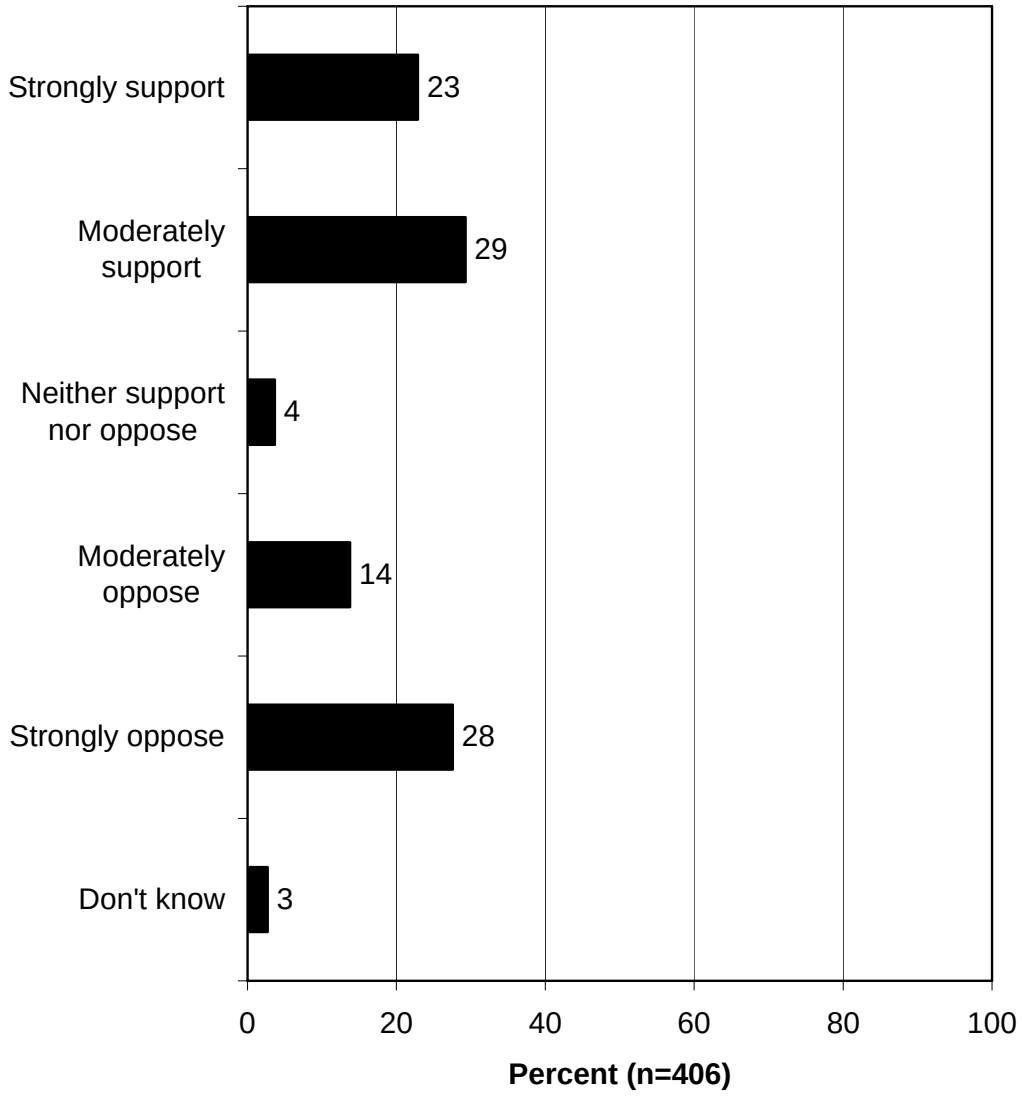
- Bird hunters are about evenly split in support and opposition to a regulation that would require hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department: 45% support, but 43% oppose. Also note that most support is moderate, but most opposition is strong.
  - In follow-up, respondents were then informed that some scientists have documented that some wildlife have become sick or died as the result of ingesting lead shot, and then they were asked about their support or opposition to the same regulation banning lead shot. Support rises slightly: 52% support, and 42% oppose.
  - Those who oppose were asked for their reasoning. They most commonly indicate that they do not think there is anything wrong with lead shot. Another important reason is that non-lead shot is not deemed as being as effective as lead shot.

- Bird hunters were then asked to indicate their likely subsequent hunting activity if a regulation were implemented requiring hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department. The large majority (66%) say it would have no effect on their subsequent bird hunting frequency.
  - In follow-up, those who would go bird hunting on these lands less frequently (or stop altogether) were asked to indicate why. The top answers are that non-lead shot is too expensive and that it is not as effective as lead shot.
  - Also in follow-up, respondents were asked if they would make any other changes to their hunting not previously discussed in the survey if the non-lead shot regulation were implemented. Most respondents indicated that they would have no other changes.

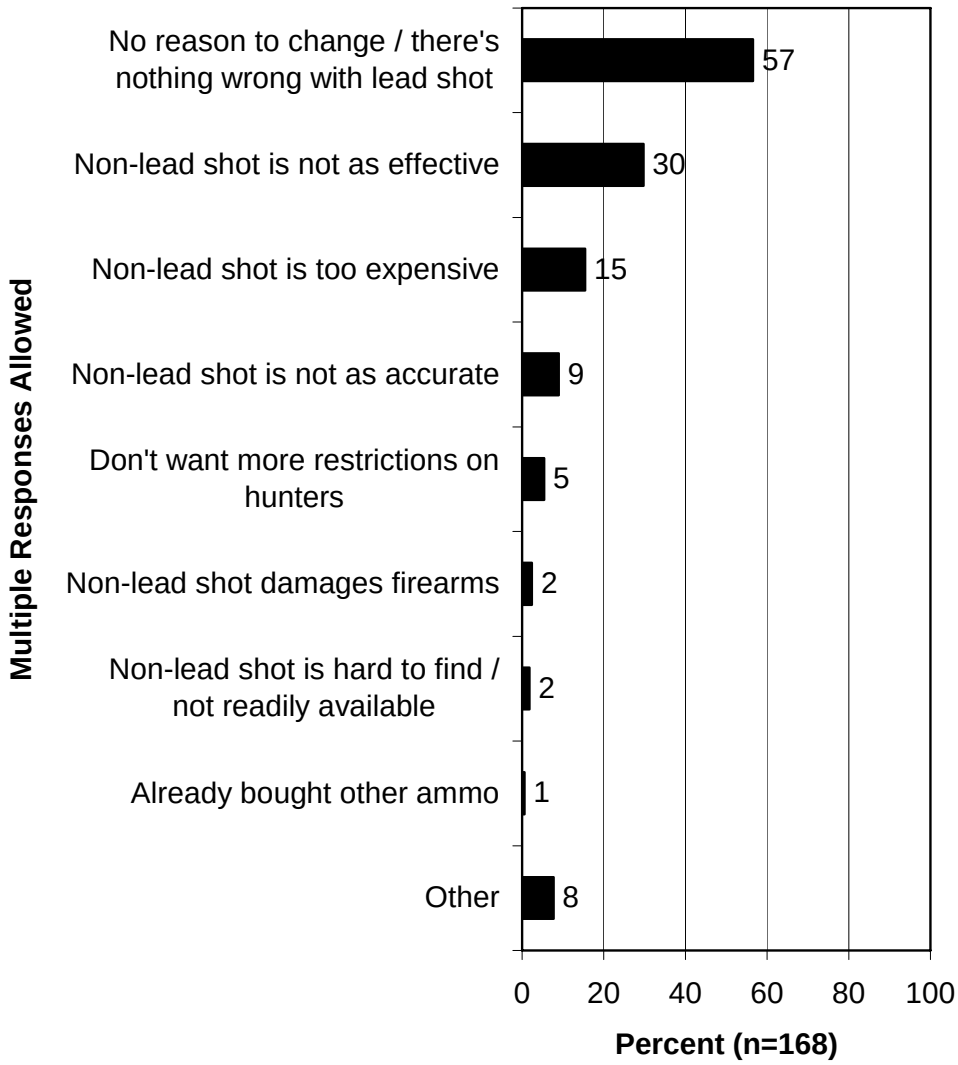
Q19. Would you support or oppose a regulation in Washington that requires hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Washington Department of Fish and Wildlife?



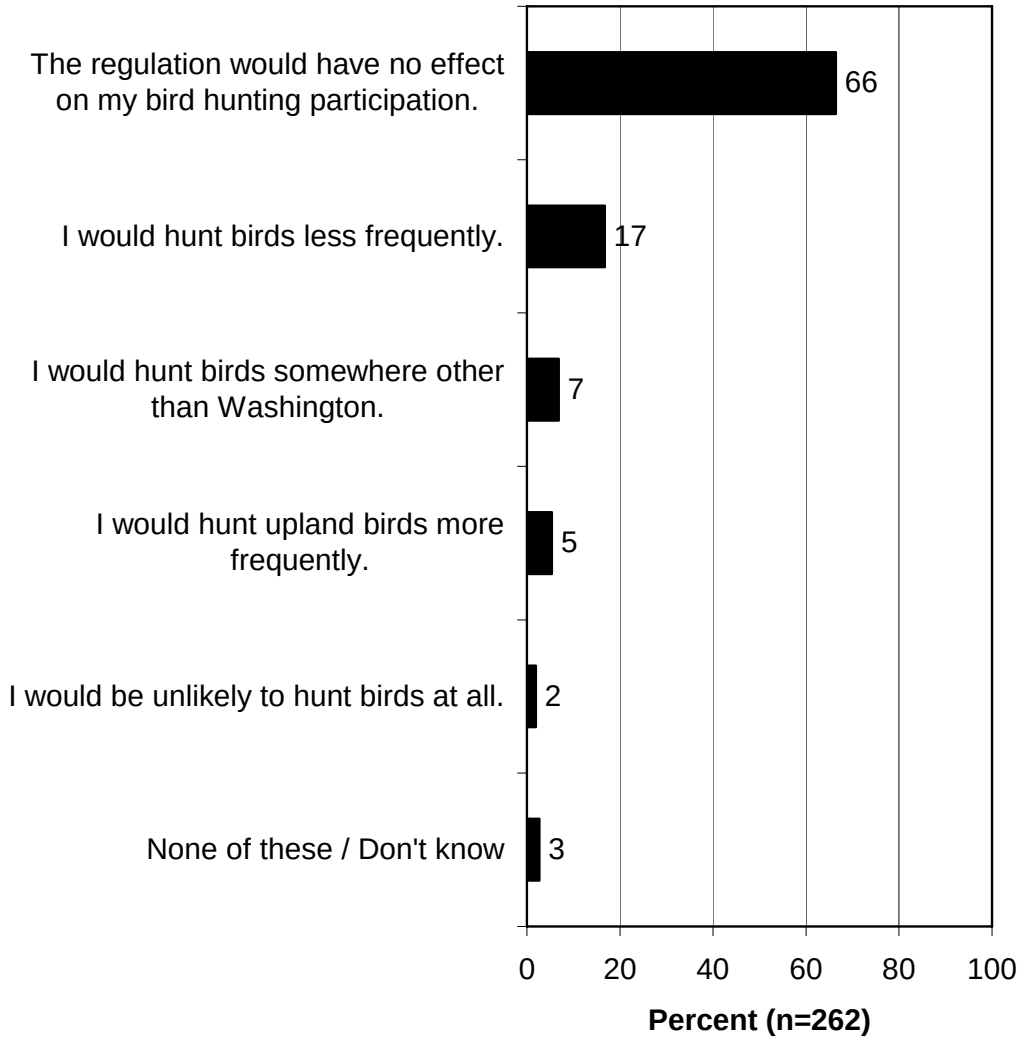
Q21. Knowing that some scientists have documented that some wildlife have become sick or died as the result of ingesting lead shot, would you support or oppose a regulation in Washington that requires hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Washington Department of Fish and Wildlife?



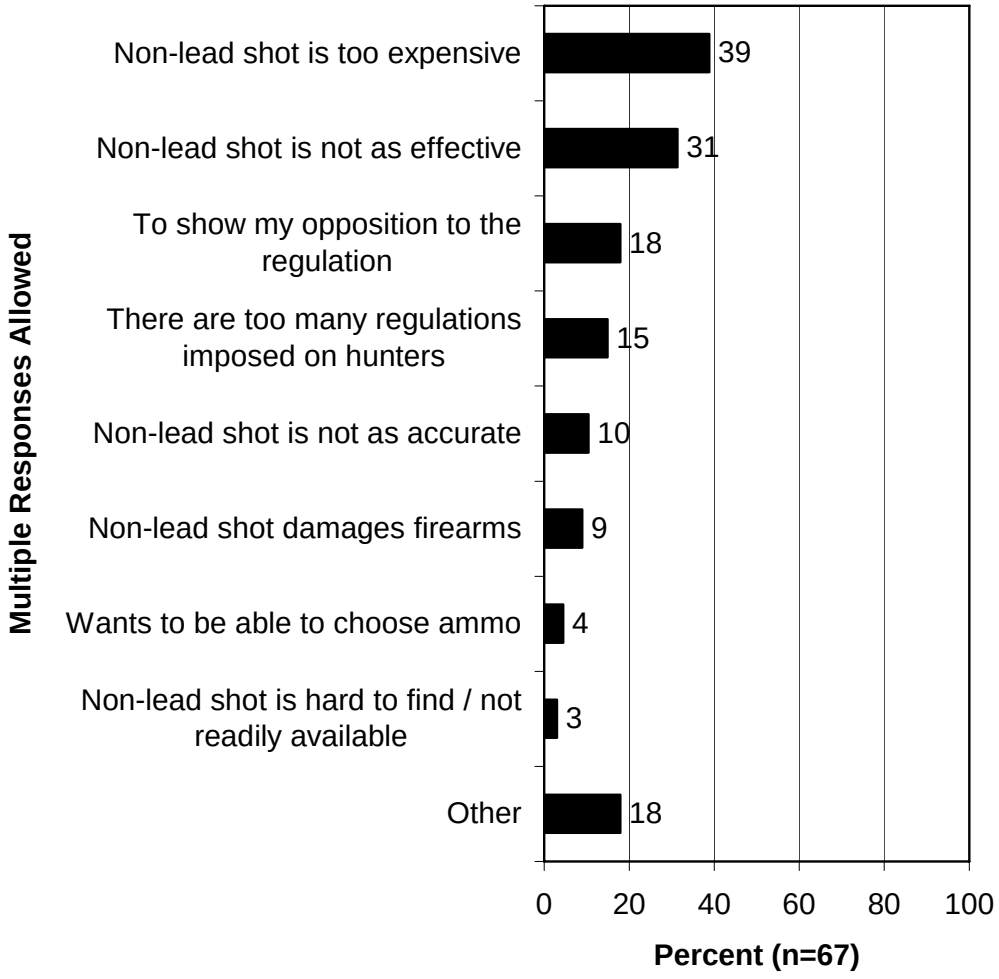
Q24. Why do you oppose a regulation that requires hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department? (Asked of those who oppose a regulation in Washington that requires hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Washington Department of Fish and Wildlife.)



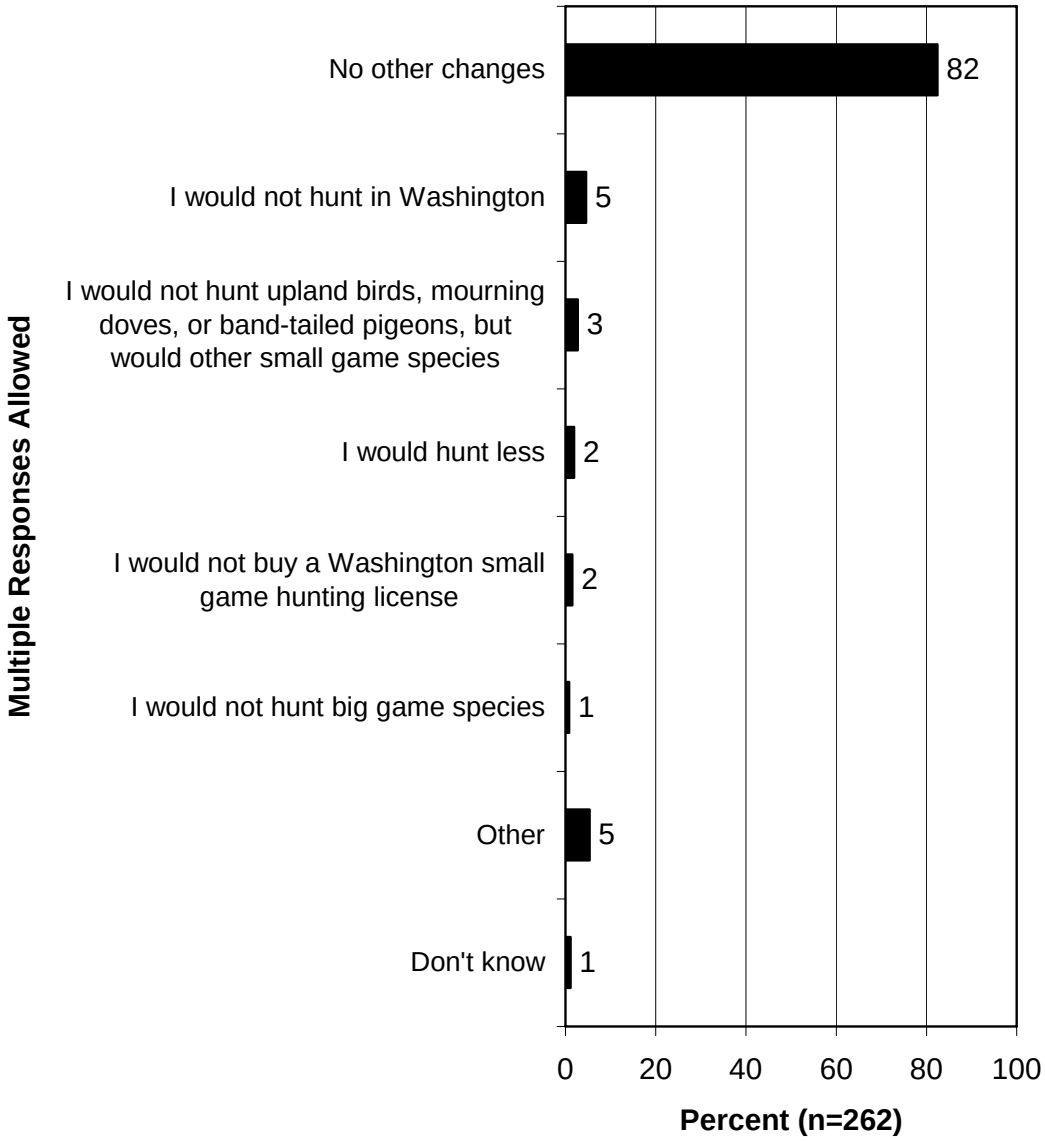
Q26. If a regulation requiring hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department is implemented in Washington, which of the following statements would best describe the effect the regulation would have on your upland bird, mourning dove, and band-tailed pigeon hunting? (Asked of those who have hunted upland birds, mourning doves, or band-tailed pigeons in Washington in the past 3 years.)



Q30. Why would you hunt birds less frequently, somewhere other than Washington, or not at all if a regulation requiring hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department is implemented in Washington? (Asked of those who have hunted upland birds, mourning doves, or band-tailed pigeons in Washington in the past 3 years and who would hunt these birds less frequently or hunt them elsewhere if non-lead shot were required.)



Q34. Are there any other changes you would make to your hunting in Washington if a regulation requiring hunters to use non-lead shot for upland bird, mourning dove, and band-tailed pigeon hunting on all wildlife areas owned or managed by the Department is implemented? (Asked of those who have hunted upland birds, mourning doves, or band-tailed pigeons in Washington in the past 3 years.)



INTERNET ACCESS AND VISITS TO THE DEPARTMENT WEBSITE

- Most deer hunters access the Internet at home (77%). Just under a fourth (23%) access it at work. Meanwhile, 18% indicate not accessing the Internet.
  - Regarding deer hunters' Internet connections for personal use, highspeed connections (76%) exceed dial-up connections (21%) by almost 4 to 1.

- About three-quarters of deer hunters indicated that they have visited the Department's website in the past 6 months, typically no more than four times in that time period.

- Most elk hunters access the Internet at home (78%), and about a fourth (24%) access it at work. Meanwhile, 16% indicate not accessing the Internet.
  - Regarding elk hunters' Internet connections for personal use, highspeed connections (81%) far exceed dial-up connections (15%).

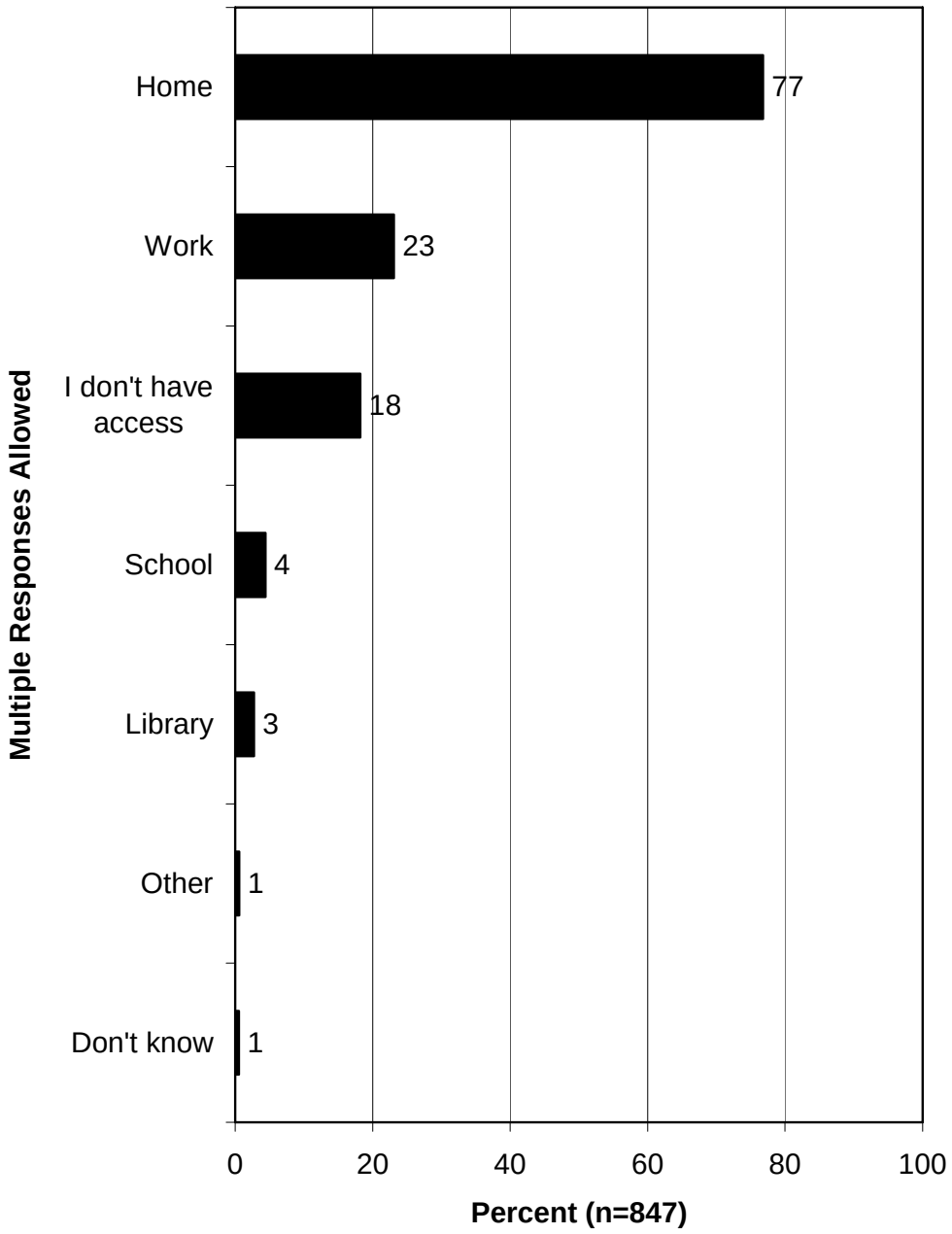
- About four-fifths of elk hunters indicated that they have visited the Department's website in the past 6 months, typically no more than six times in that time period.

- Most bird hunters access the Internet at home (83%), and about a third (34%) access it at work. Meanwhile, 11% indicate not accessing the Internet.
  - Regarding bird hunters' Internet connections for personal use, highspeed connections (84%) far exceed dial-up connections (12%).

- About three-fourths of bird hunters indicated that they have visited the Department's website in the past 6 months, typically no more than six times in that time period.

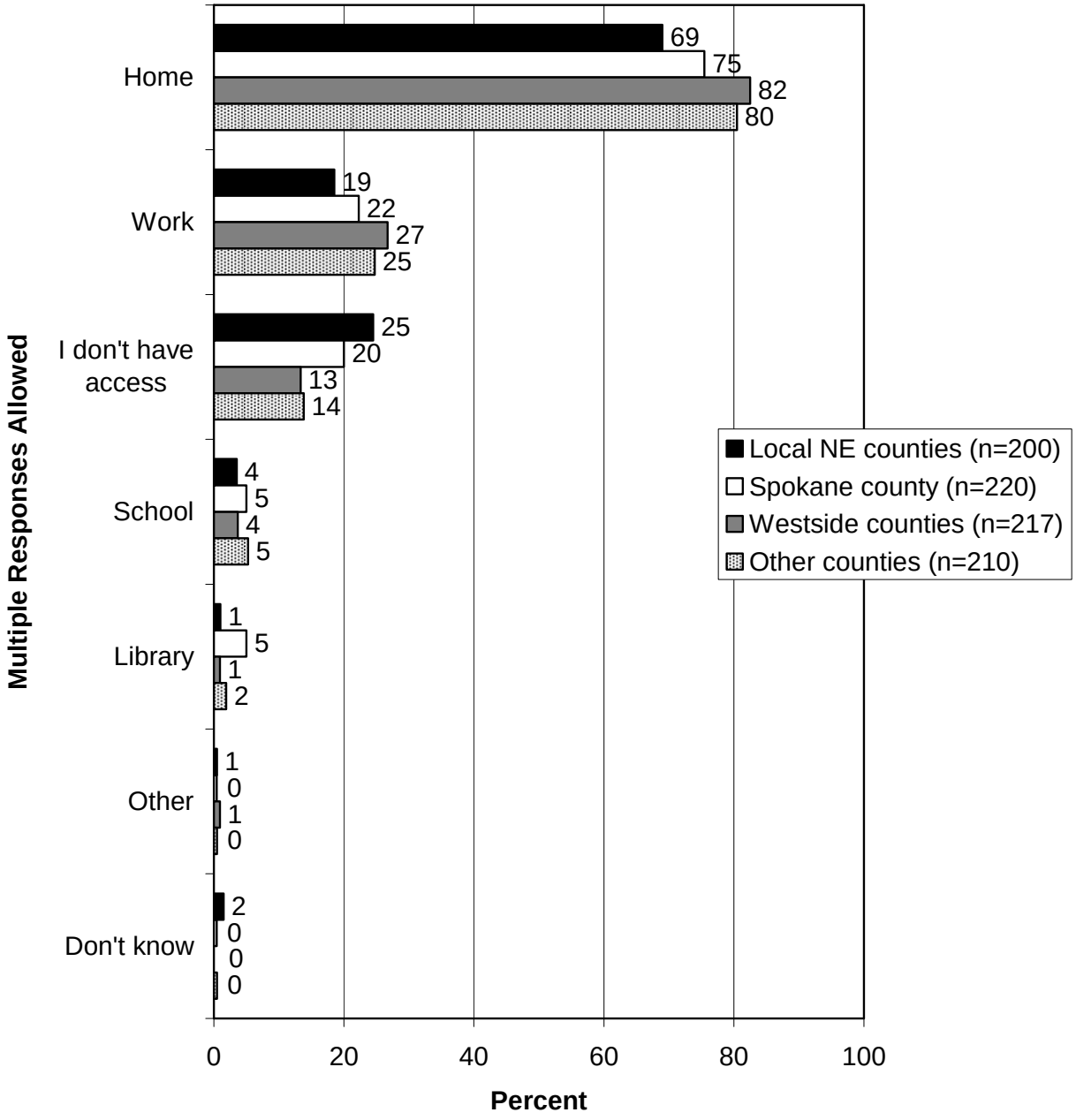
(Deer Hunters)

Q36. Where do you have access to the Internet?



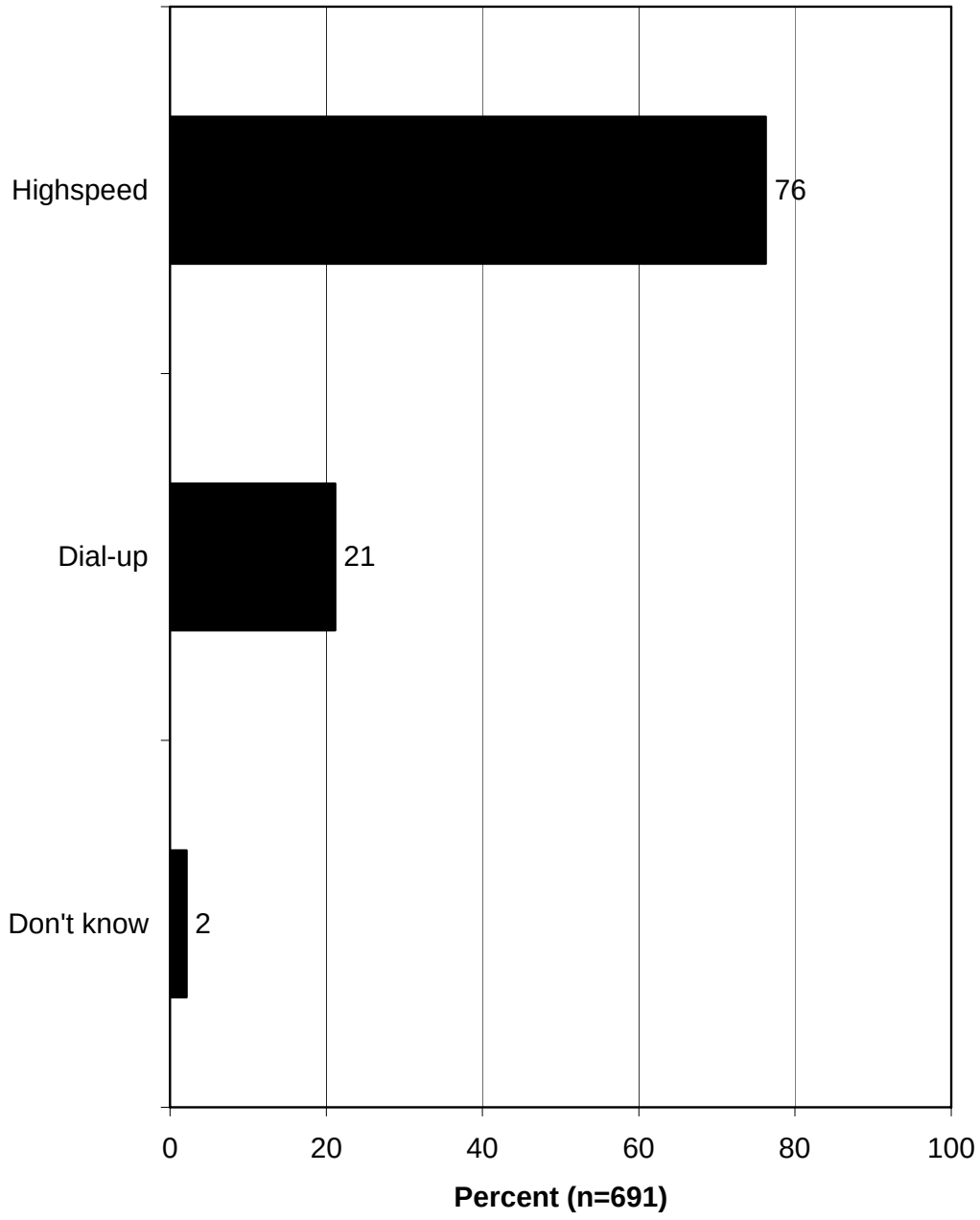
(Deer Hunters)

Q36. Where do you have access to the Internet?



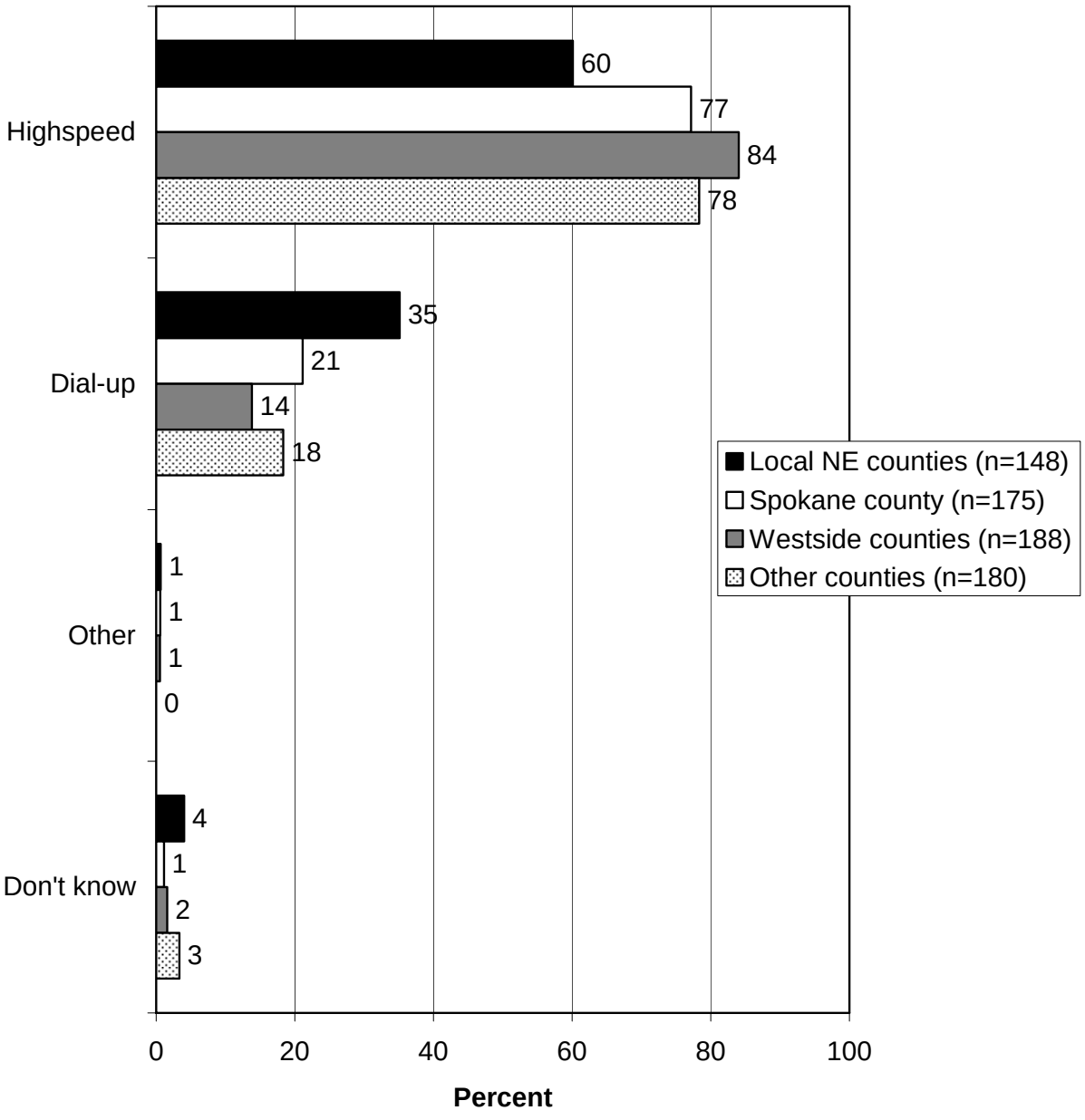
(Deer Hunters)

Q38. Is the Internet connection that you primarily use for personal use dial-up or highspeed? (Asked of those who have access to the Internet.)



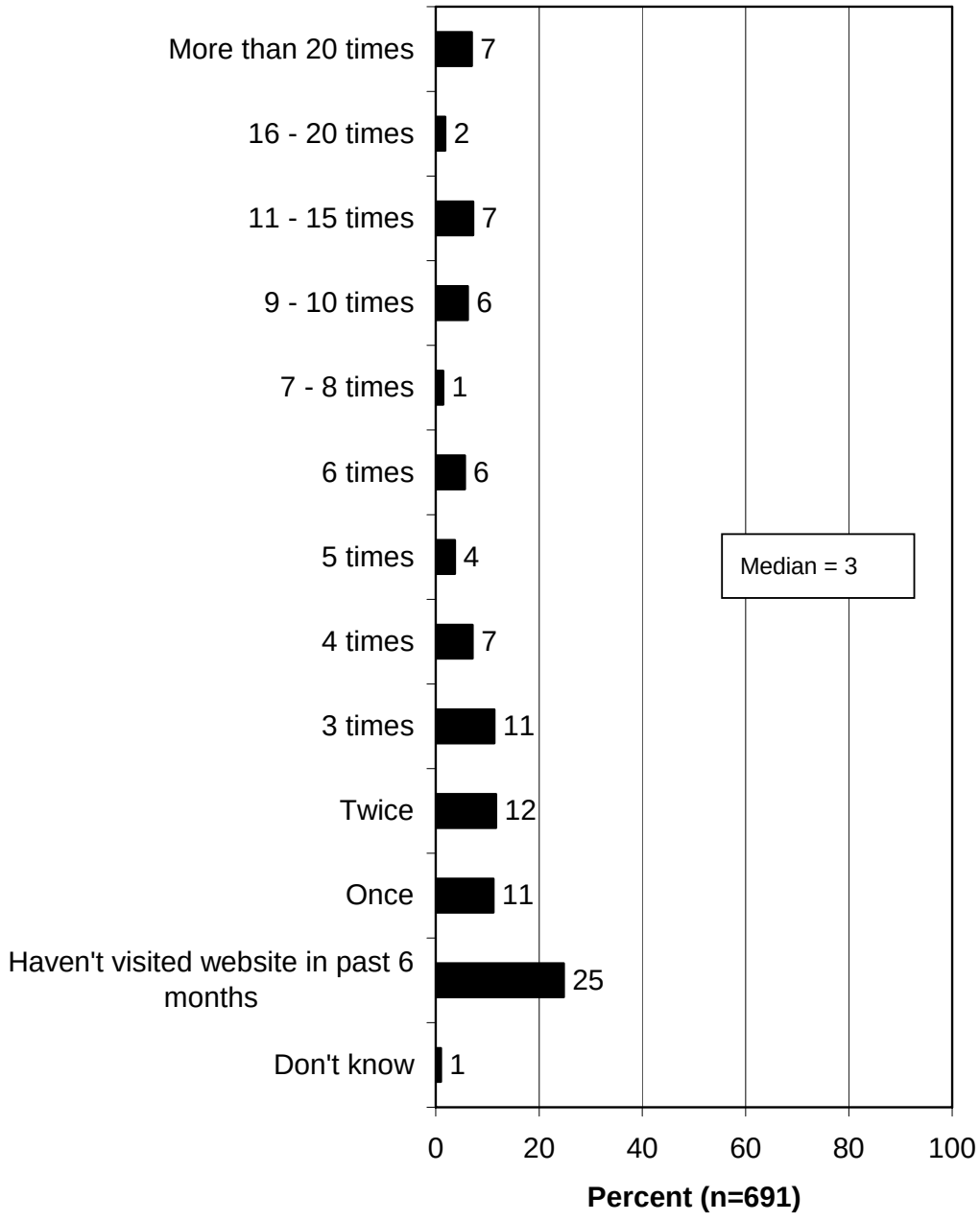
(Deer Hunters)

Q38. Is the Internet connection that you primarily use for personal use dial-up or highspeed? (Asked of those who have access to the Internet.)



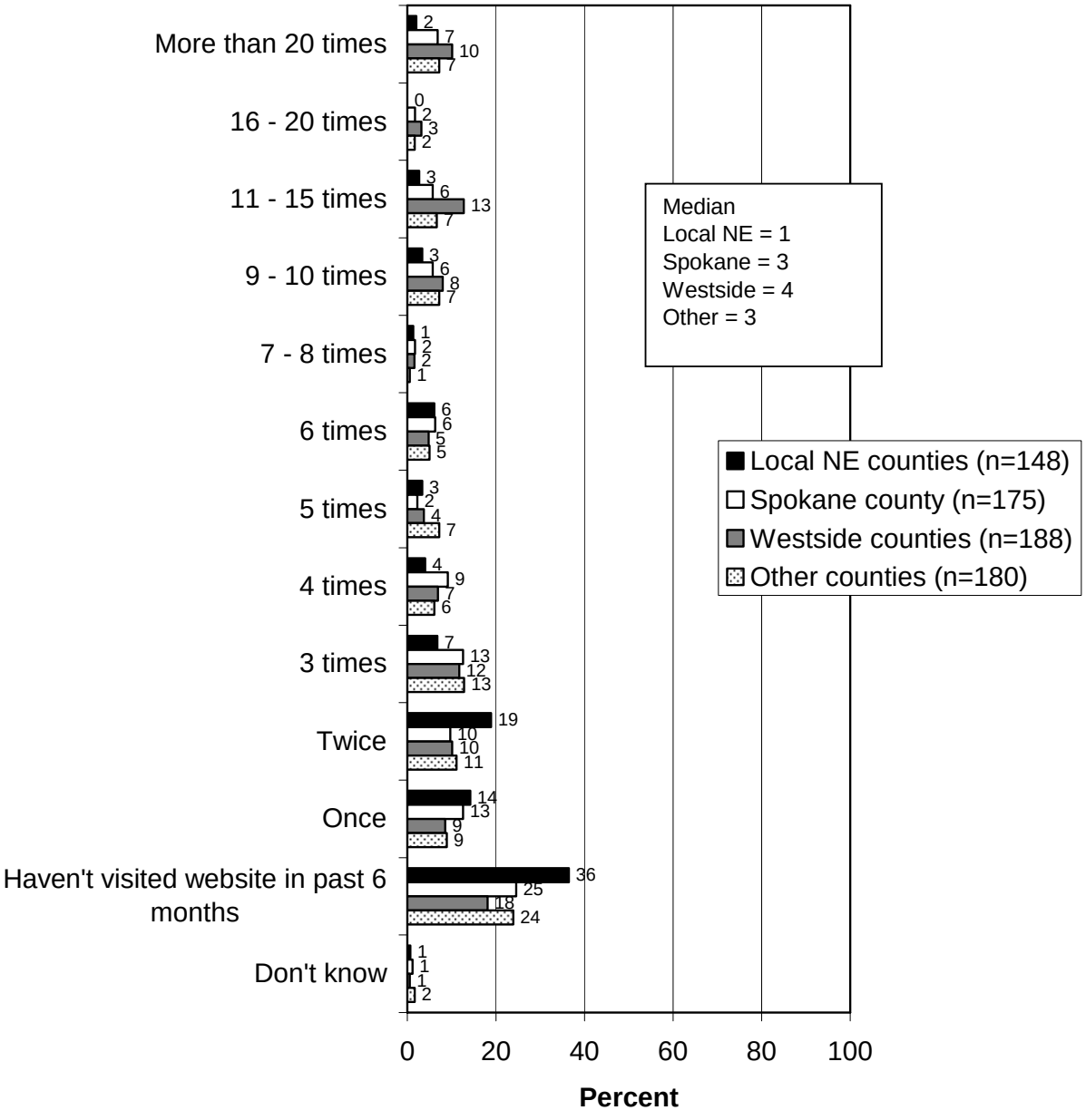
(Deer Hunters)

Q40. In the past 6 months, how many times have you visited the Washington Department of Fish and Wildlife's website? (Asked of those who have access to the Internet.)



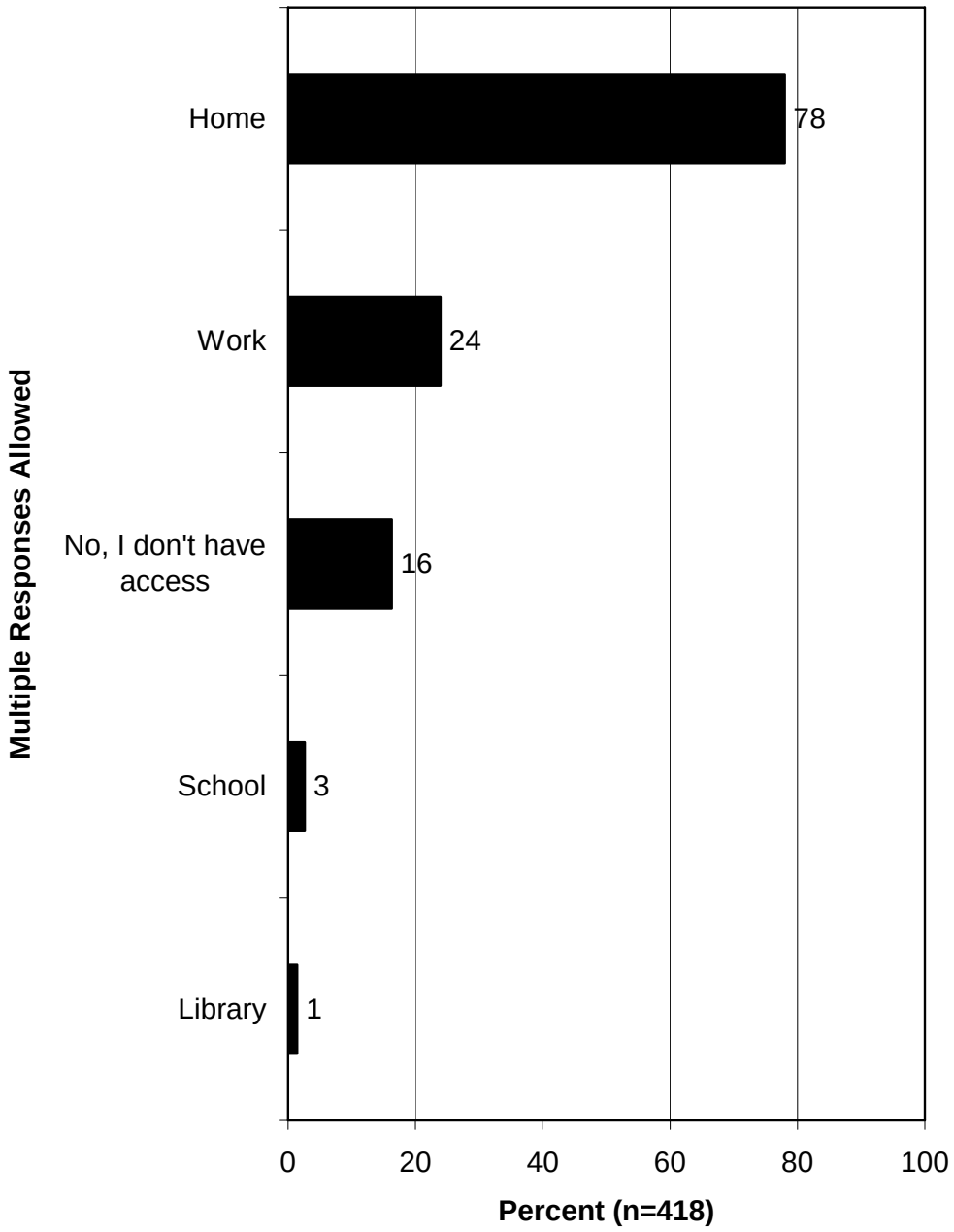
(Deer Hunters)

Q40. In the past 6 months, how many times have you visited the Washington Department of Fish and Wildlife's website? (Asked of those who have access to the Internet.)



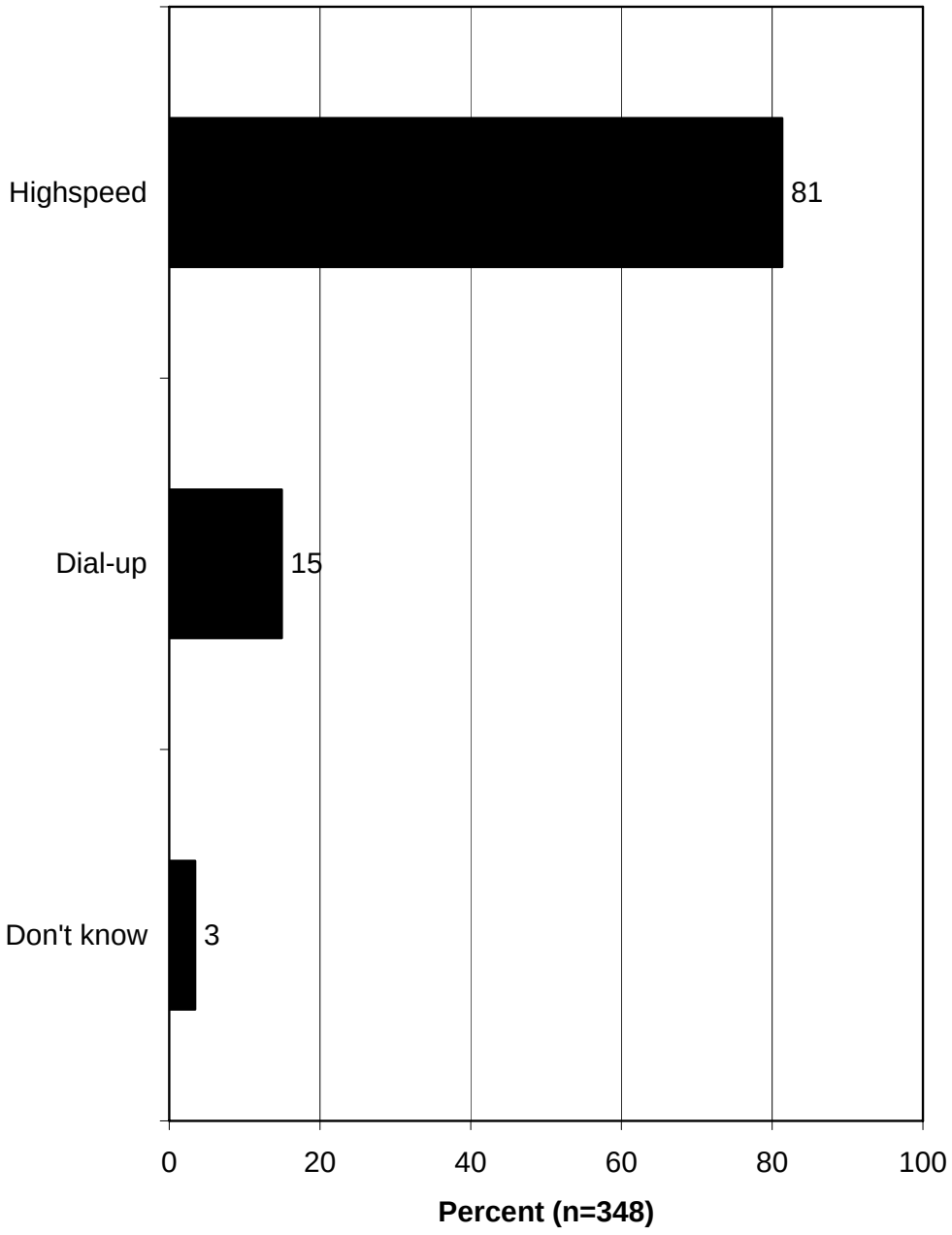
(Elk Hunters)

Q28. Do you have access to the Internet?



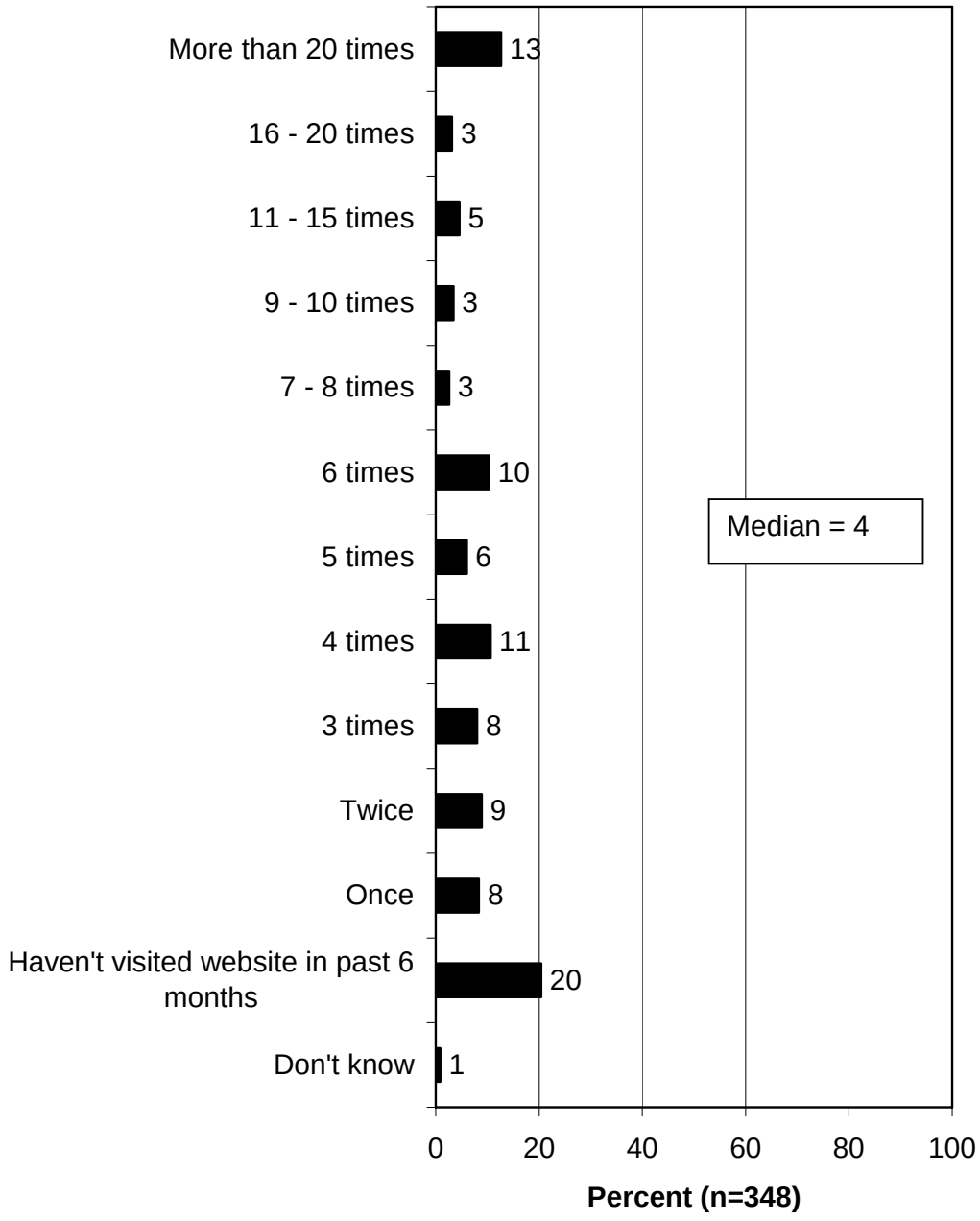
(Elk Hunters)

Q30. Is the Internet connection that you primarily use for personal use dial-up or highspeed? (Asked of those who have access to the Internet.)



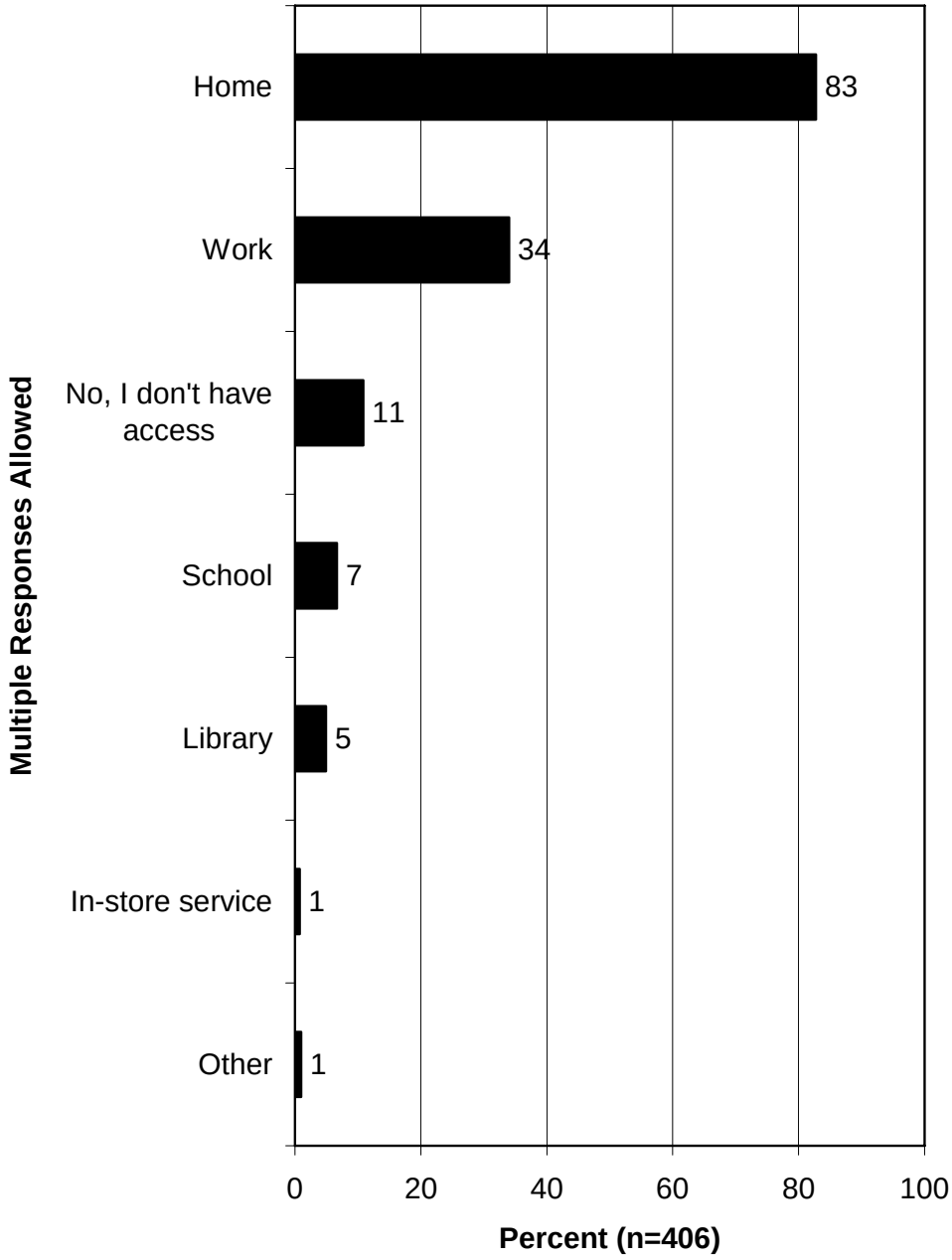
(Elk Hunters)

Q32. In the past 6 months, how many times have you visited the Washington Department of Fish and Wildlife's website? (Asked of those who have access to the Internet.)



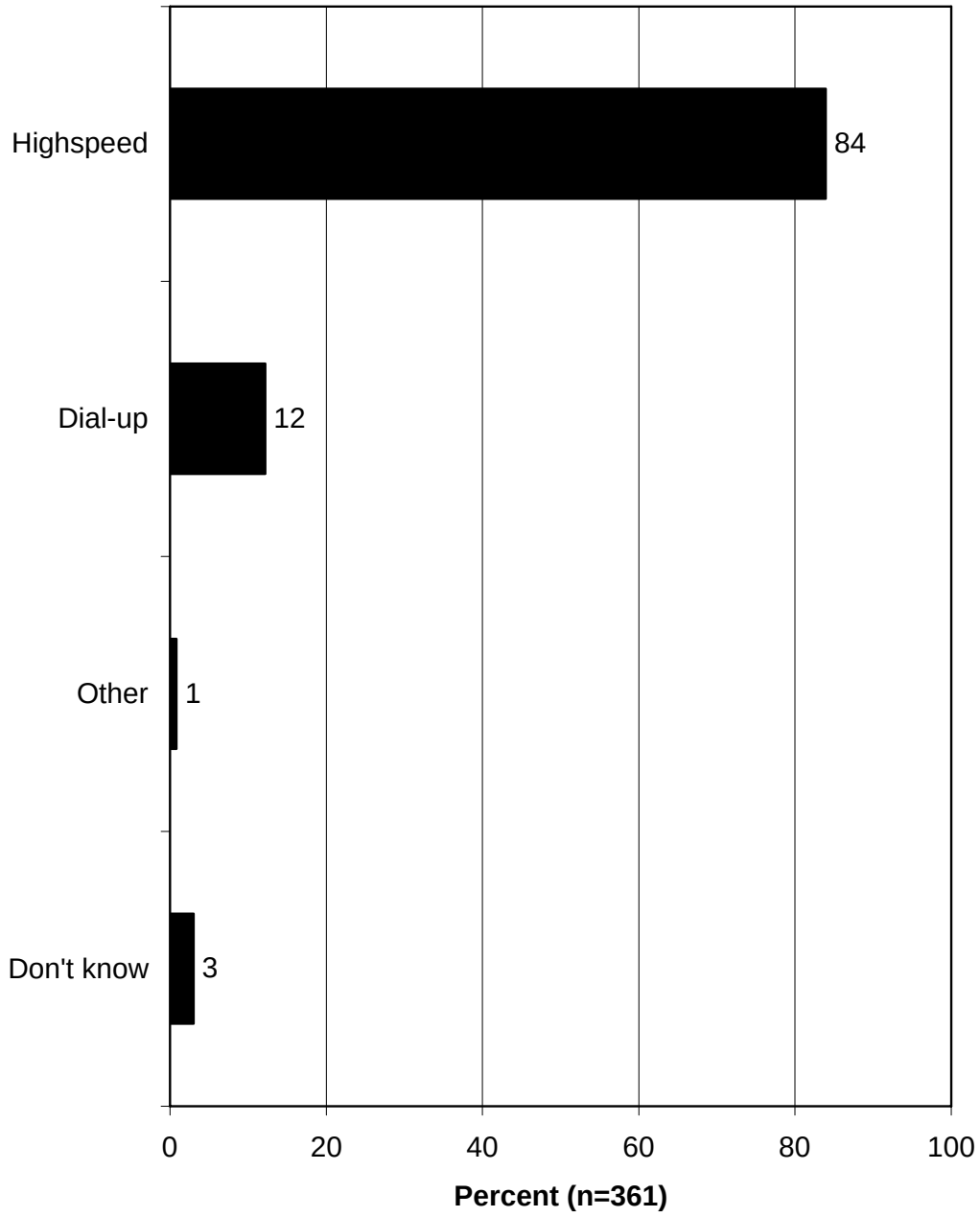
(Bird Hunters)

Q39. Do you have access to the Internet?



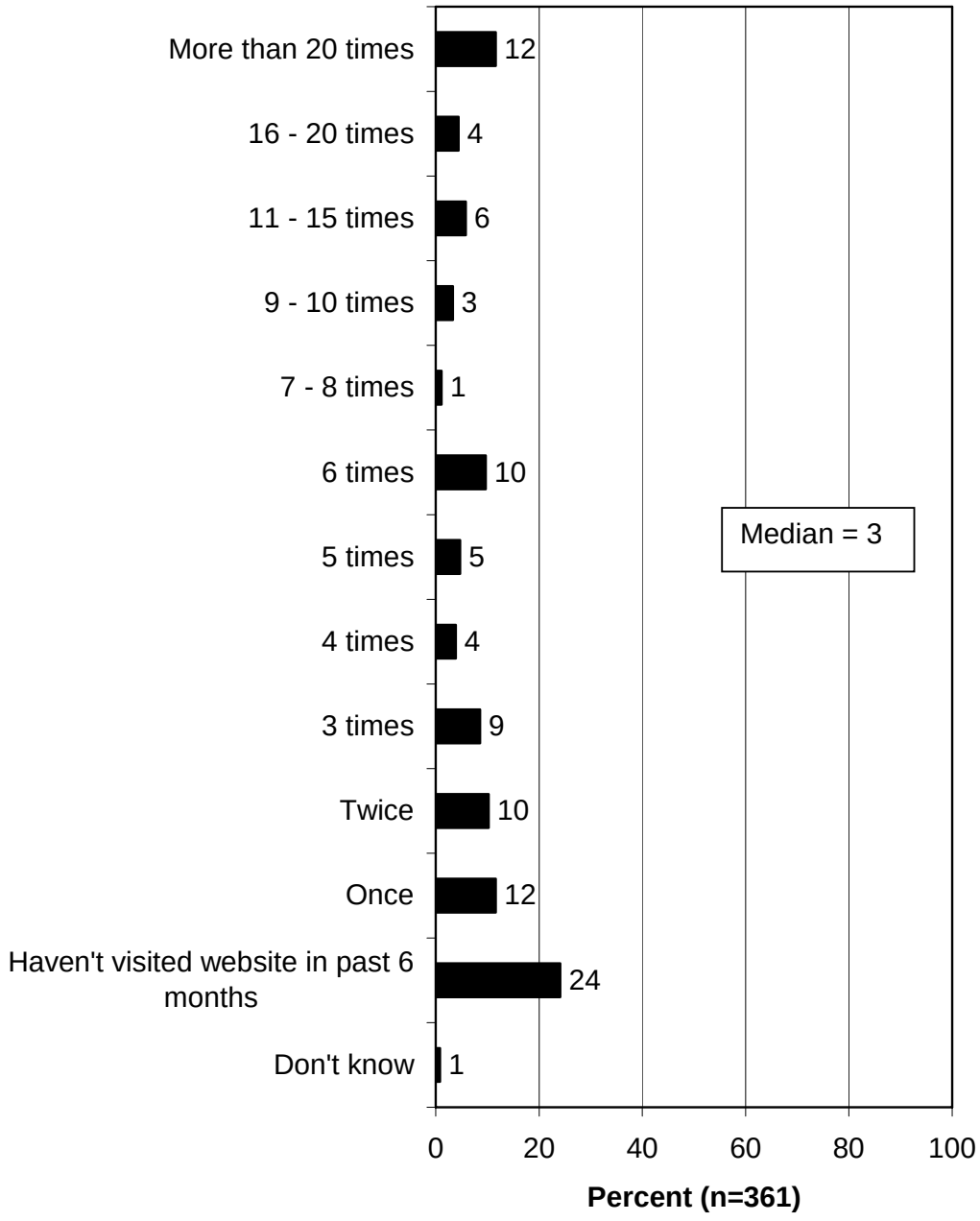
(Bird Hunters)

Q41. Is the Internet connection that you primarily use for personal use dial-up or highspeed?



(Bird Hunters)

Q43. In the past 6 months, how many times have you visited the Washington Department of Fish and Wildlife's website? (Asked of those who have access to the Internet.)



ABOUT RESPONSIVE MANAGEMENT

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

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

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

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

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

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

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

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