Maryland Residents' Attitudes Toward Black Bear Management

Conducted for the Maryland Department of Natural Resources

2022

RESPONSIVE MANAGEMENT

MARYLAND RESIDENTS' ATTITUDES TOWARD BLACK BEAR MANAGEMENT

2022

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EXECUTIVE SUMMARY

INTRODUCTION AND METHODOLOGY

This study was conducted for the Maryland Department of Natural Resources (DNR) to determine residents' attitudes toward black bear management in Maryland. Topics explored in the study include knowledge and awareness of black bears in Maryland, encounters with black bears, perceived problems with bears and nuisance prevention strategies, and opinions on black bear population regulation (including support for regulated hunting), among other issues. In addition, the study includes trends analyses, in which the results of this survey are compared to those of similar surveys conducted in 2004 and 2013. The study entailed a probability-based, scientific telephone survey of Maryland residents 18 years old and older.

For the survey, telephones were selected as the preferred sampling medium because of the almost universal ownership of telephones (both landlines and cell phones were called in their proper proportions). Additionally, telephone surveys, relative to mail or online surveys, allow for more scientific sampling and data collection, as well as higher response rates. Research has shown that respondents who are more interested in the subject matter of the study are more likely to respond to a mail survey, resulting in skewed results. For example, avid outdoor recreationists and/or those with an interest in the work of the DNR will disproportionately choose to complete the survey, while other individuals may not. Responsive Management's professional telephone interviewers are adept at avoiding this type of bias by persuading each randomly selected respondent that their opinion, regardless of how "informed" they feel it may be, is important to the study. In addition, if a potential respondent cannot be reached on the first call, subsequent calls are placed on different days of the week and different times of the day to ensure a probability-based, scientifically valid sample. Another advantage of telephone surveys, relative to mail or online surveys, is that they provide higher quality data because of the clarification that a live interviewer provides for any questions in the survey.

Telephone surveys also allow respondents who cannot or will not respond to a mail or online survey to participate. Mail and online surveys systematically exclude those who have difficulty reading. According to statistics published by the U.S. Department of Education, 54% of U.S. residents 16 to 74 years old, which represents about 130 million Americans, lack proficiency in literacy, reading below the sixth-grade level.[1] Therefore, many might be reticent to complete a mail or online survey they must read to themselves. In addition, those with poor or limited internet service or who are intimidated by technology may be reticent to complete a survey online. In a telephone survey, however, a live interviewer reads the survey questions, clarifies them if necessary, and assists the respondent with completing the survey, making it an excellent option to reduce bias and increase response rates for the survey.

[1] U.S. Department of Education, National Center for Education Statistics. 2019. *Adult Literacy* (https://nces.ed.gov/fastfacts/display.asp?id=69). Downloaded November 8, 2022.
See also: Nietzel, M.T. 2020. "Low Literacy Levels Among U.S. Adults Could Be Costing the Economy $2.2 Trillion a Year." *Forbes*, September 9, 2020.

Finally, telephone surveys also have fewer negative effects on the environment than do mail surveys because of the reduced use of paper, reduced energy consumption for delivering and returning the questionnaires, and reduced quantity of material to be disposed of after the survey.

The telephone survey questionnaire was developed cooperatively by Responsive Management and the DNR, primarily based on the previous surveys conducted in 2004 and 2013 as well as the research team's familiarity with natural resources and wildlife management. The telephone survey was coded for integration with Responsive Management's computer-assisted telephone interviewing (CATI) system. An important aspect of this CATI system is that the computer controls which questions are asked, but each telephone survey is administered by a live interviewer. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

The sample of adult Maryland residents was obtained from Marketing Systems Group, a firm that specializes in providing scientifically valid samples for survey research. The sample included both landlines and cellular phones in their proper proportions, and the survey was administered to reflect these proportions. The sampling plan was designed to achieve a representative sample of residents both statewide and stratified at a regional level for each of the DNR's four regions. Note that the regions were weighted to be in their proper proportions for statewide data.

The survey was conducted in October and November 2022, and Responsive Management obtained a total of 818 completed questionnaires.

The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management. The data were weighted in each region by demographic and participatory factors, including age and gender. The regions were then weighted to match their proper proportions in the statewide analysis. Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of Maryland residents 18 years old and older, the sampling error is at most plus or minus 3.42 percentage points.

KNOWLEDGE ABOUT BLACK BEARS

Knowledge about black bears is generally low among Maryland residents: 12% know *a great deal* or *a moderate amount*, compared to 44% who know *a little* and 43% who know *nothing*.

A slight majority of residents (52%) think black bears are *rare* in Maryland, while 4% think they are *abundant* and 34% think they are *common*.

A majority of residents (70%) think black bears are found in Western Maryland, while 16% think bears are distributed throughout the state. (Black bears are mostly found in the Western and Mid-Western Regions.)

BLACK BEAR POPULATION

About half of residents (48%) said that the black bear population in Maryland is at *about the right level*, while many more said it is *too low* (22%) than *too high* (2%). Over a quarter (28%) did not know how to respond.

Residents were asked how they thought the black bear population in Maryland changed over the past 5 years, and the results are divided: 19% said it *increased*, 23% said it *stayed the same*, and 28% said it *decreased*. The top response was *don't know* at 30%.

Just over half of residents (53%) said that the black bear population in their county is at *about the right level*, while many more said it is *too low* (24%) than *too high* (3%); 20% did not know.

About half of residents (47%) said the black bear population in their county has *stayed about the same*, while twice as many thought it *decreased* (20%) than *increased* (10%). Meanwhile, 22% did not know.

CONTACT WITH BLACK BEARS

About a quarter of residents (24%) have seen evidence of a black bear in Maryland. Most residents from the Western Region (88%) and the Mid-Western Region (55%) have seen evidence.

Overall, 12% of residents have encountered a black bear in the wild in Maryland. Two thirds of Western Region residents have encountered a bear.

A slight majority of those who encountered a bear (52%) have not done so in the past 2 years; the mean over this timeframe is 1.1 encounter and the median is 0.

Those who encountered a black bear in Maryland were most often hiking or driving when they had the encounter.

The majority of those who encountered a bear (73%) describe the experience as positive, while only 2% describe it as negative. In follow-up, those who said the experience was positive most often said this because the bear was not aggressive, they rarely see or had never seen bears before, and that they generally enjoy seeing bears. The reasons given most often by those who said the experience was negative are that the bear was aggressive, they are afraid of bears, and the bear was damaging property.

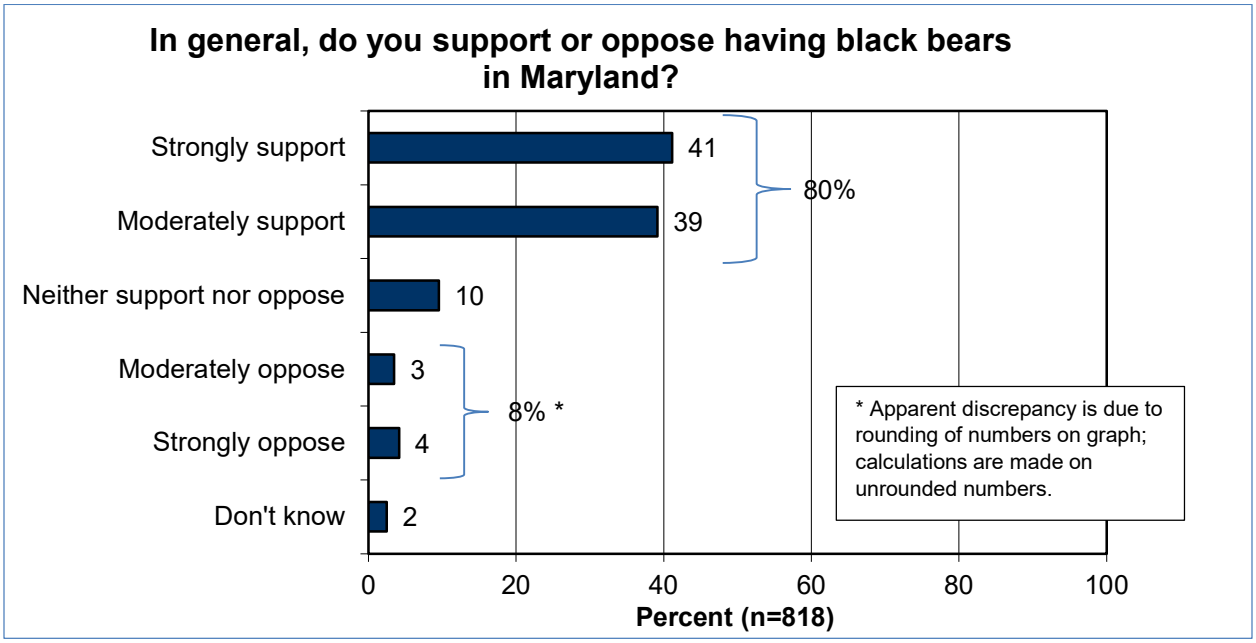
PROBLEMS WITH BLACK BEARS

Only 1% of residents have had any problems with black bears in the past 2 years; bear problems were confined to the Western and Mid-Western Regions. By far, residents who had problems with bears most often said that the bears got into their garbage (69% of the group stated this).

Among those who had problems with bears, 10% contacted someone for assistance (in the follow-up question, everyone said that they contacted the DNR). In another follow-up question, 55% were satisfied with the service they received from the DNR, but 31% were dissatisfied.

ATTITUDES TOWARD BLACK BEARS AND BLACK BEAR MANAGEMENT

Four fifths of residents (80%) *strongly* or *moderately* support having black bears in Maryland, compared to only 8% who oppose.



Nearly half of residents (46%) rated the DNR's management of black bears in the top half of the scale: 13% rated it *excellent* and 33% rated it *good*. At the other end of the scale, 17% rated the management as *good* and 1% rated it *poor*. Over a third (36%) did not know.

A majority of residents (70%) support allowing the black bear population to naturally expand into other parts of Maryland from their current location in the westernmost counties. In contrast, 18% oppose an expansion.

A majority of residents (62%) would support having black bears in their county; however, 26% would oppose.

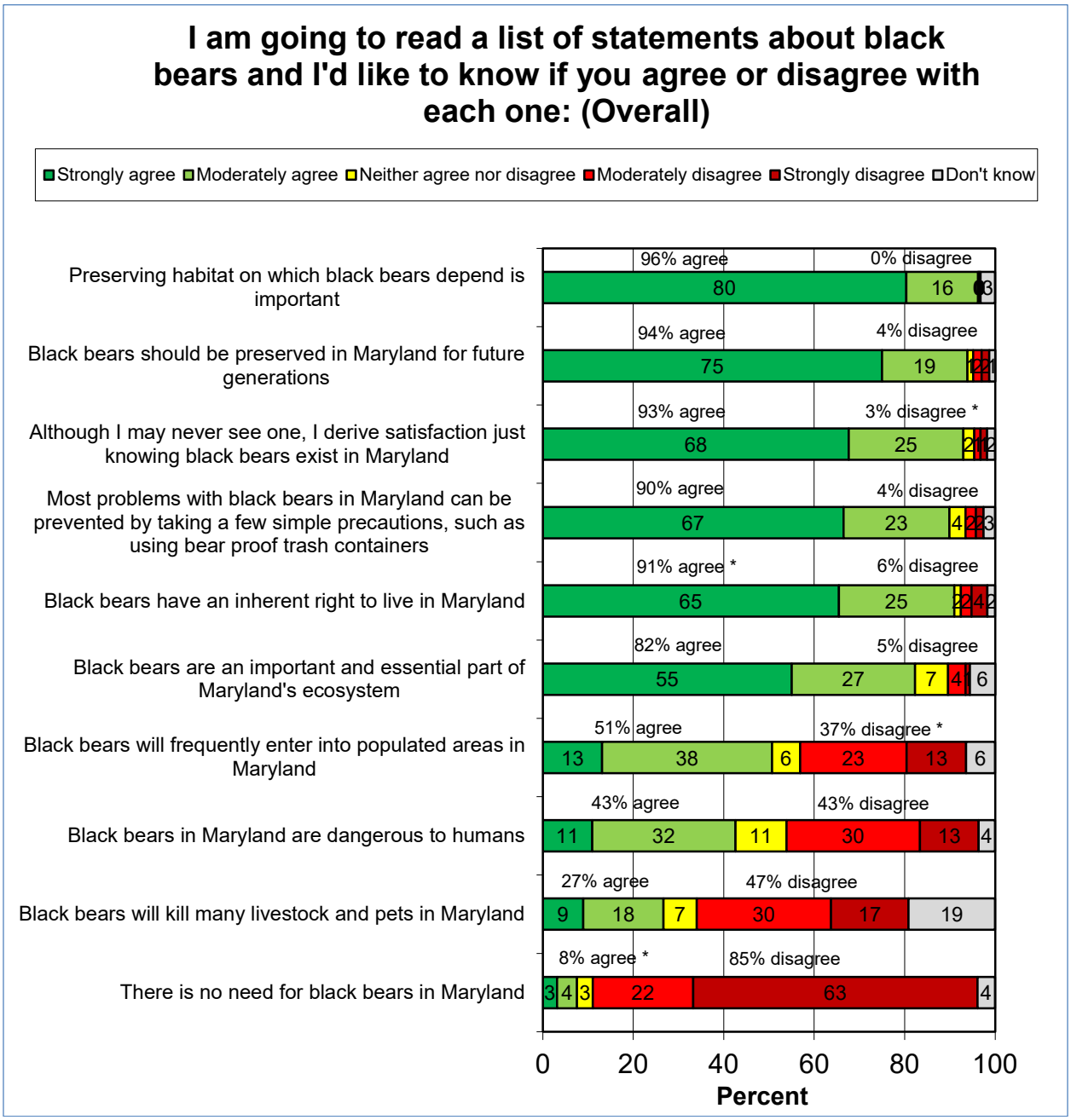
Residents are split on having black bears within 1/2 mile of their home: 47% would support and 46% would oppose.

WILDLIFE VALUE STATEMENTS ABOUT BLACK BEARS

The survey asked residents if they agreed or disagreed with 10 statements about black bears. As the graph shows, very high percentages agreed with statements regarding the well-being of bears and their habitat, their value to the ecosystem and future generations, and their right to

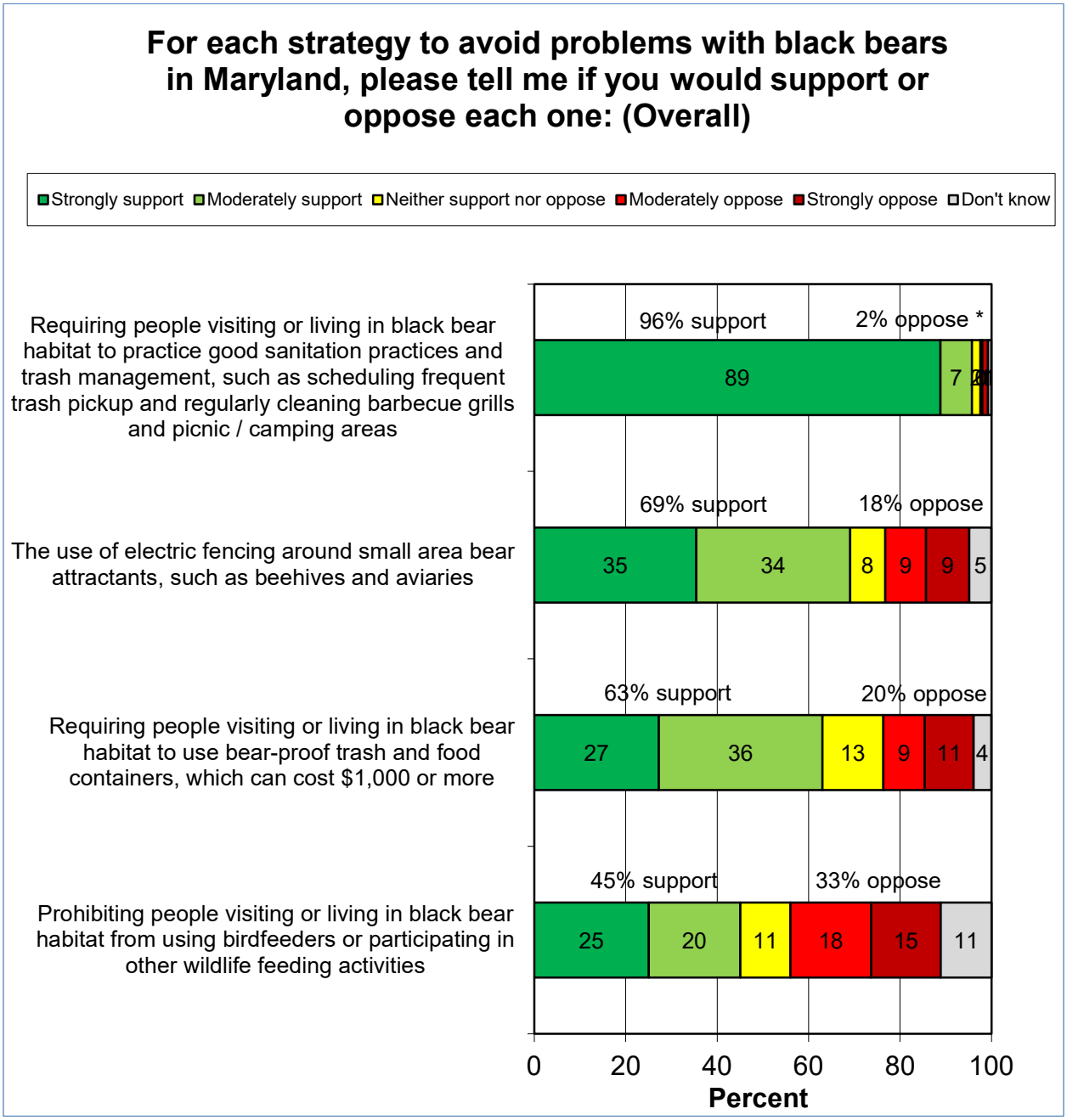
live in the state. At the bottom, there is more disagreement than agreement about the danger of bears to livestock and pets, and very few residents agree that there is no need for black bears in Maryland.

All series graphs are presented in descending order of the first response option; this graph is shown in descending order of *strongly* agree percentages. Also, some summations appear to be off by 1% because they are summed on unrounded numbers; these instances are denoted by an asterisk.



BEAR CONFLICT PRECAUTIONS AND MANAGEMENT STRATEGIES

Residents were asked if they support or oppose four management strategies to avoid potential problems with bears. Nearly all residents (96%) support requiring people in bear habitat to practice good sanitation practices. This is followed by the use of electric fencing around bear attractants (69%) and requiring bear-proof trash and food containers (63%). Finally, 45% support and 33% oppose prohibiting birdfeeders or wildlife feeding in bear habitat.



The survey addressed management strategies for specific types of potential bear problems. First, two strategies were considered to prevent damage to pets or livestock. Most residents (89%) support the DNR using repellents (such as bear pepper spray, loud noises, trained dogs, and non-lethal shotgun ammunition). Regarding the DNR issuing depredation (kill) permits, however, the result is more divided: 54% support, but 32% oppose.

Next, three strategies were considered to prevent damage to personal property or crops. Again, there was overwhelming support (90%) for the DNR using repellents, while 48% support and 38% oppose the DNR issuing depredation permits. The third strategy, allowing private citizens to kill bears without a depredation permit, had much more opposition (59%) than support (27%).

Finally, there was nearly unanimous support for the DNR using repellents to protect human safety (95% support this).

DAMAGE FROM BLACK BEARS

A majority of residents (59%) think property owners should be compensated for bear damage to livestock, whereas 24% disagree. Similarly, 62% of residents agree and 23% disagree that property owners should be compensated for bear damage to crops.

Among those who think property owners should be compensated for damage from black bears to livestock or crops, 41% think the money should come from general state revenues (state tax). No other financial source was named by more than 7% of the group; 22% did not know.

BLACK BEAR HUNTING

The survey informed respondents that black bear hunting is permitted in the four counties where bear are primarily located (Garrett, Allegany, Washington, and Frederick Counties). A majority of residents (53%) would support and 35% would oppose bear hunting in their county.

The survey asked residents if they would support or oppose bear hunting if they knew that most funds for bear management over the past 20 years came from hunter-derived revenue. With that information, support increased slightly to 60% (from 53% in the earlier question without conditions).

Overall, 8% of Maryland residents consider themselves to be hunters. Among this group, 9% have applied for a Maryland black bear hunting permit. Over a third of those who applied for a bear permit (37%) have hunted black bear in Maryland

Two thirds of those who applied for a permit (67%) are satisfied with the current black bear hunting system. The majority of those who consider themselves hunters (77%) do not have any desired changes to the current black bear hunting system in Maryland.

INFORMATION ABOUT BLACK BEARS

In an open-ended question, residents were asked where they get information about black bears. The top responses are the internet (not including the DNR website) (26% stated this), TV (11%), personal experience (10%), the news (nonspecific) (8%), and the DNR website (5%). Note that 15% do not need or get information and 13% do not know.

Residents were asked to name the agency or organization that is the most credible source of information on black bears in Maryland, in another open-ended question. By far the top response was the DNR (53% stated this), with no other organization being named by more than 2% of residents. A substantial percentage (38%) did not know.

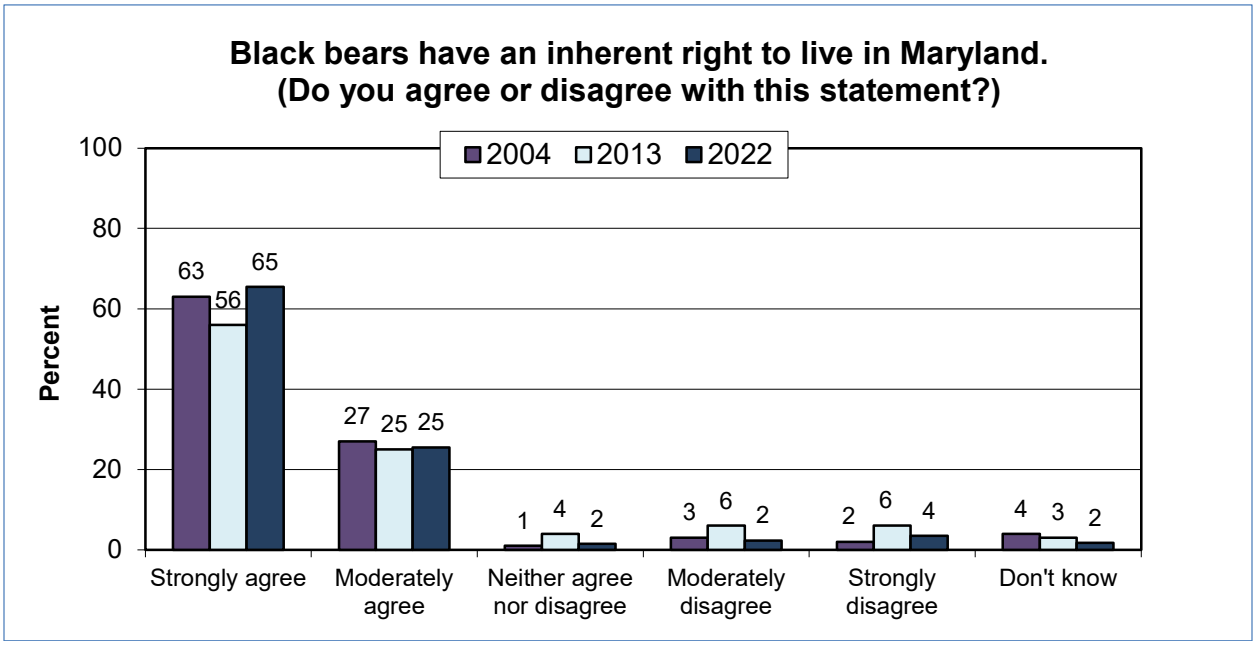
DNR BLACK BEAR PRODUCTS

Only 5% of residents were aware that the DNR offers black bear collectible stamps and shirts for purchase to help compensate farmers for damage caused by bears.

Among those who were aware of the DNR products, 4% have purchased them. A majority of those who were not aware of the DNR products (60%) said they would consider purchasing them in the future.

TRENDS

The trend graph below shows an increase in agreement that bears have an inherent right to live in Maryland. This is representative of trend results throughout the survey–a modest but notable increase in Maryland residents having favorable attitudes toward the presence and well-being of black bears in the state.



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INTRODUCTION AND METHODOLOGY

This study was conducted for the Maryland Department of Natural Resources (DNR) to determine residents' attitudes toward black bear management in Maryland. Topics explored in the study include knowledge and awareness of black bears in Maryland, encounters with black bears, perceived problems with bears and nuisance prevention strategies, and opinions on black bear population regulation (including support for regulated hunting), among other issues.

Responsive Management conducted similar studies for the DNR in 2004 and 2013, and results of the current study have been compared to earlier results to evaluate trends in residents' attitudes and behaviors regarding black bears in the state. The study entailed a probability-based, scientific telephone survey of Maryland residents 18 years old and older. 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 (both landlines and cell phones were called in their proper proportions). Additionally, telephone surveys, relative to mail or online surveys, allow for more scientific sampling and data collection, as well as higher response rates. Research has shown that respondents who are more interested in the subject matter of the study are more likely to respond to a mail survey, resulting in skewed results. For example, avid outdoor recreationists and/or those with an interest in the work of the DNR will disproportionately choose to complete the survey, while other individuals may not. Responsive Management's professional telephone interviewers are adept at avoiding this type of bias by persuading each randomly selected respondent that their opinion, regardless of how "informed" they feel it may be, is important to the study. In addition, if a potential respondent cannot be reached on the first call, subsequent calls are placed on different days of the week and different times of the day to ensure a probability-based, scientifically valid sample. Another advantage of telephone surveys, relative to mail or online surveys, is that they provide higher quality data because of the clarification that a live interviewer provides for any questions in the survey.

Telephone surveys also allow respondents who cannot or will not respond to a mail or online survey to participate. Mail and online surveys systematically exclude those who have difficulty reading. According to statistics published by the U.S. Department of Education, 54% of U.S. residents 16 to 74 years old, which represents about 130 million Americans, lack proficiency in literacy, reading below the sixth-grade level.[2] Therefore, many might be reticent to complete a mail or online survey they must read to themselves. In addition, those with poor or limited internet service or who are intimidated by technology may be reticent to complete a survey online. In a telephone survey, however, a live interviewer reads the survey questions, clarifies them if necessary, and assists the respondent with completing the survey, making it an excellent option to reduce bias and increase response rates for the survey.

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Finally, telephone surveys also have fewer negative effects on the environment than do mail surveys because of the reduced use of paper, reduced energy consumption for delivering and returning the questionnaires, and reduced quantity of material to be disposed of after the survey.

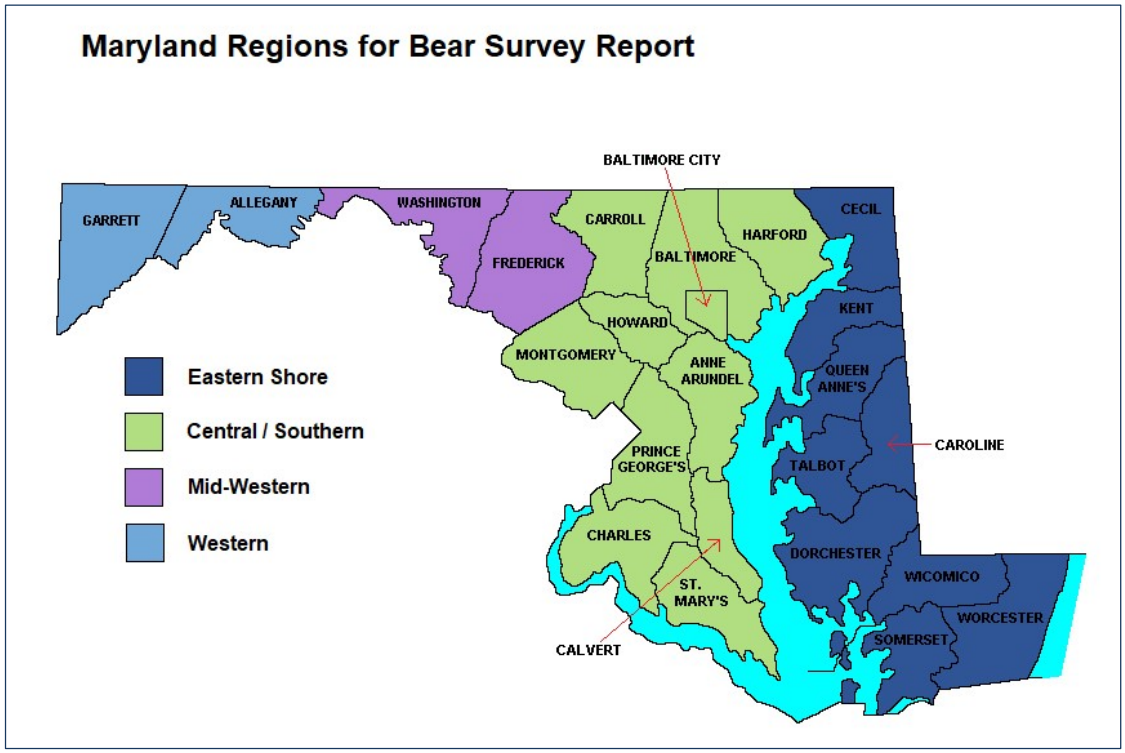
QUESTIONNAIRE DESIGN

The telephone survey questionnaire was developed cooperatively by Responsive Management and the DNR, primarily based on the previous surveys conducted in 2004 and 2013 as well as the research team's familiarity with natural resources and wildlife management. The telephone survey was coded for integration with Responsive Management's computer-assisted telephone interviewing (CATI) system. An important aspect of this CATI system is that the computer controls which questions are asked, but each telephone survey is administered by a live interviewer. Responsive Management conducted pre-tests of the questionnaire to ensure proper wording, flow, and logic in the survey.

SURVEY SAMPLE

The sample of adult Maryland residents was obtained from Marketing Systems Group, a firm that specializes in providing scientifically valid samples for survey research. The sample included both landlines and cellular phones in their proper proportions, and the survey was administered to reflect these proportions.

The sampling plan was designed to achieve a representative sample of residents both statewide and stratified at a regional level for each of the DNR's four regions, as shown in the map below. For the analysis of results, the data were weighted to be in their proper statewide proportions.



TELEPHONE SURVEY DATA COLLECTION AND QUALITY CONTROL

The interviews were conducted using Responsive Management's CATI system, which utilizes software for telephone data collection. 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 instrument was programmed so that the CATI system branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection. The software also allowed for error checks during the interview to help ensure that the data were accurate and valid.

Responsive Management has interviewers who have been trained according to the highest industry standards originally established by the Council of American Survey Research Organizations (the survey industry trade association that has since merged with Marketing Research Association to form The Insights Association). 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 questionnaires. The Survey Center managers and statisticians monitored the telephone 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.

Telephone surveying times were Monday through Friday from noon to 9:00 p.m. and Saturday from noon to 7:00 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.

Those with a cellular number who could not be reached after five attempts were sent a text message inviting them to participate in the survey. An example is shown on the following page; due to the limited characters allowed in a text, the initial short message links to the longer message.

Hello. This is Amanda from Responsive Management. Maryland Department of Natural Resources would like your input on wildlife management! Please consider participating in this survey: [link].

The Maryland Department of Natural Resources is conducting a study on wildlife management in Maryland. We want to know more about everyone's opinions and knowledge, regardless of experience or interest. Your input is vital and will help Maryland with future wildlife management decisions.

Your answers will be kept completely confidential and will not be associated with your contact information in any way.

Responsive Management, an independent research firm that specializes in natural resource and fish and wildlife issues, has been contracted by the Department to conduct this study. If you need technical assistance with the survey, please contact Responsive Management via email at research@responsivemanagement.com.

Thank you for your time and willingness to participate.

Please click "Next" below to begin the survey.

After the telephone and text surveys were obtained, the Survey Center managers and statisticians checked each completed survey to ensure clarity and completeness. The survey was conducted in October and November 2022, and Responsive Management obtained a total of 818 completed questionnaires.

DATA ANALYSIS

The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management. The data were weighted in each region by demographic and participatory factors, including age and gender. The regions were then weighted to match their proper proportions in the statewide analysis.

SAMPLING ERROR

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of Maryland residents 18 years old and older, the sampling error is at most plus or minus 3.42 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 3.42 percentage points of each other. Sampling error was calculated using the formula described below, with a sample size of 818 and a population size of 4,696,858 Maryland residents 18 years old and older.

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).

PRESENTATION OF RESULTS

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.
- 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."
- Some closed-ended questions are in a scale, such as a continuum from strongly support to strongly oppose.
- 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.

Analysts read through all of the verbatim open-ended responses and assigned them into response categories, at which point the responses could be quantified and presented in "Multiple Responses Allowed" graphs. Overall, analysts categorized over 4,300 open-ended responses.

As previously noted, the results of this survey are being compared to results from similar surveys conducted in 2004 and 2013. The overall (statewide) trend results are shown throughout the body of the report, while regional trends are presented in the Appendix.

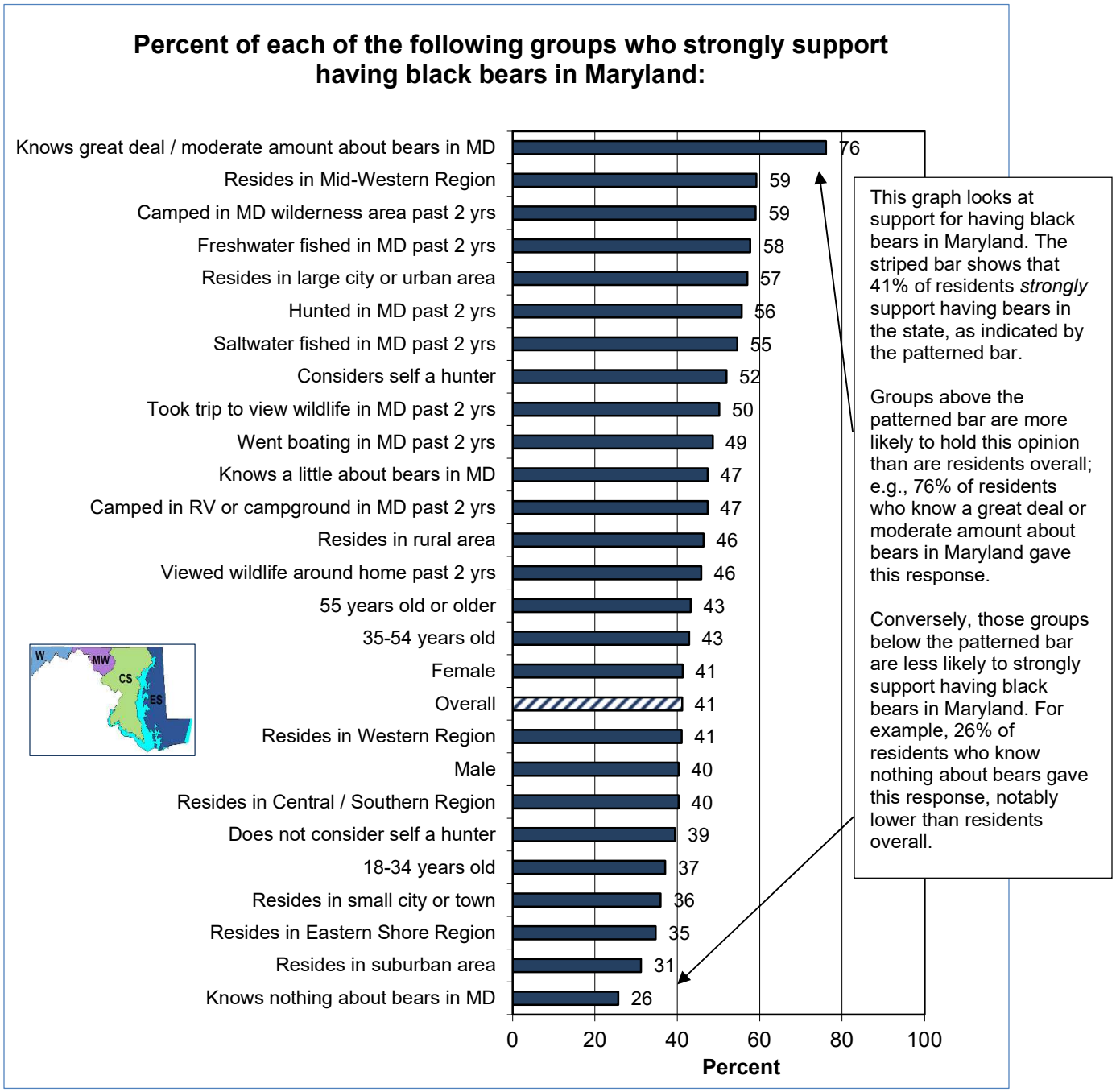
In addition to graphs depicting the results of each individual survey question, the report includes special graphs that show how various demographic groups respond to certain questions, hereinafter simply referred to as demographic analyses graphs. Groups are also included in the analyses based on participation in various recreation activities in Maryland over the past 2 years. (One of those participatory groups analyzed consists of those who camped in a wilderness area, which was one of the activities asked about in the survey. Note, however, that residents who said they camped in a wilderness area might have a different interpretation of "wilderness area" than the DNR's interpretation.)

Not all the questions were analyzed in this way; questions chosen for these analyses are those deemed to be of the most interest or utility. The example on the following page is being provided to explain how to interpret the graphs.

The example shows the percentages of the various groups who *strongly* support having black bears in Maryland. Overall, 41% of residents *strongly* support having bears in the state, as shown by the patterned bar (this means that 59% gave a different response, either one of moderate support, opposition, or a neutral or don't know response). Those groups shown above the overall bar have a higher percentage giving a *strongly* support response compared to residents overall. For instance, 76% of residents who know a great deal or moderate amount about bears gave this response, shown by the top bar. Meanwhile, those groups below the

overall bar have lower percentages who *strongly* support having black bears in Maryland; in this example, 26% of residents who know nothing about bears gave this response, substantially lower than residents overall.

When one group is above the overall bar (for instance, in this example, females), its counterpart (in this instance, males) will be below the overall bar. The distance from the overall bar matters, as well. If a group is close to the overall bar (for instance, Western Region residents in this example), then the group should not be considered markedly different from respondents overall. A rule of thumb is that the difference should be 5 percentage points or more for the difference to be noteworthy.

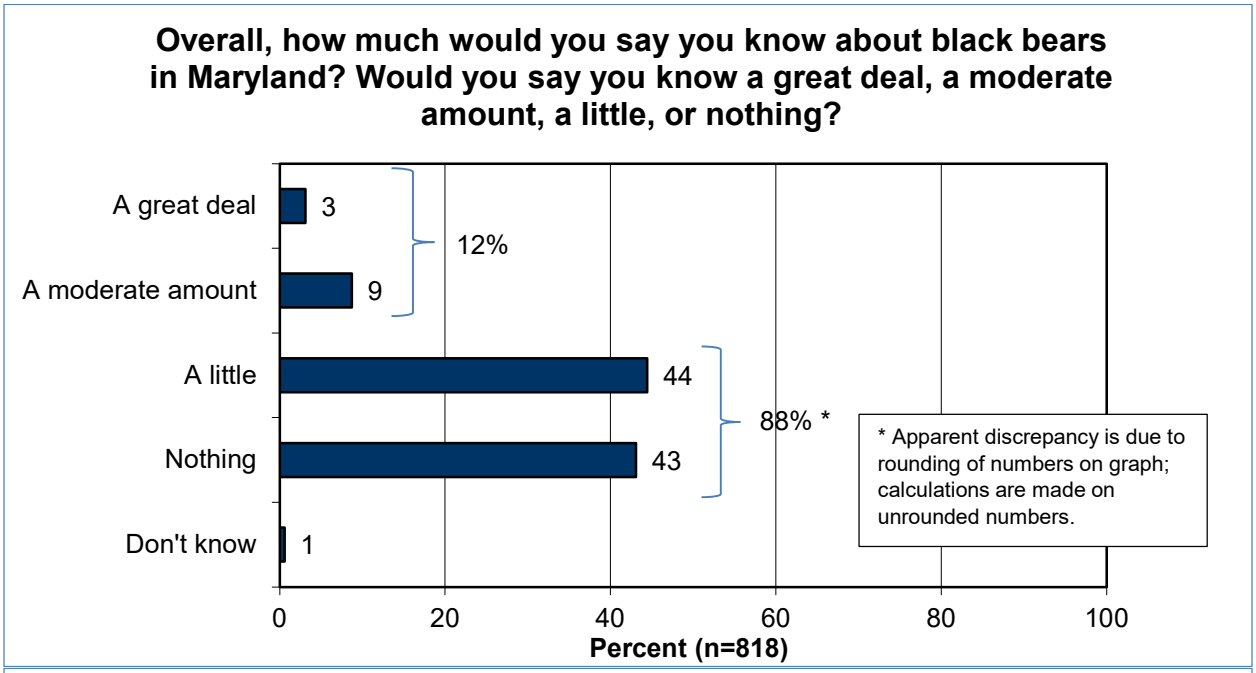


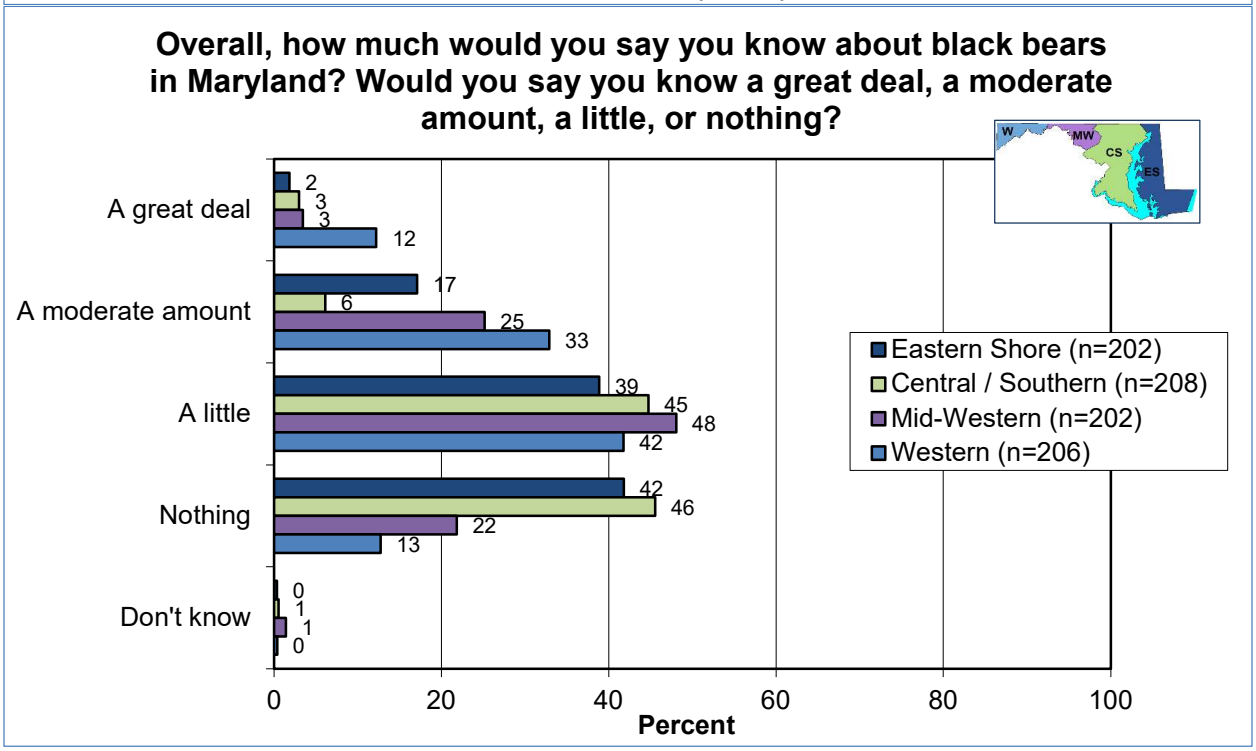
Throughout the report, results are shown in the following order:

- Overall statewide graphs.
- 4-bar regional graphs (with the exception of series graphs, in which each response option is shown in a single bar for each question in the series; for series results, each region is shown in a separate graph).
- Demographic analyses graphs (for select questions).
- Trends analyses graphs (for most questions).

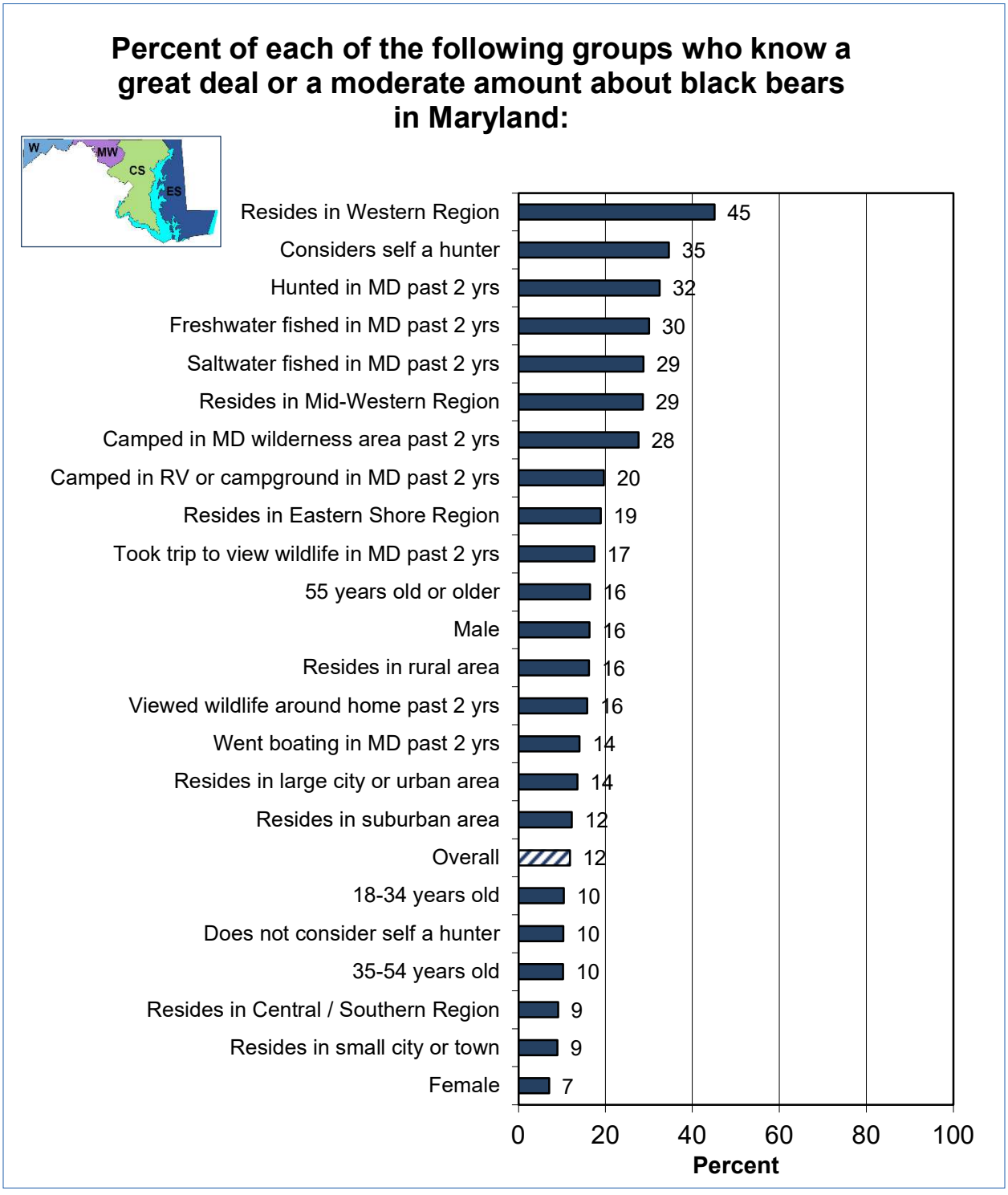
KNOWLEDGE ABOUT BLACK BEARS

Knowledge about black bears is generally low among Maryland residents: 12% know *a great deal* or *a moderate amount*, compared to 44% who know *a little* and 43% who know *nothing*.

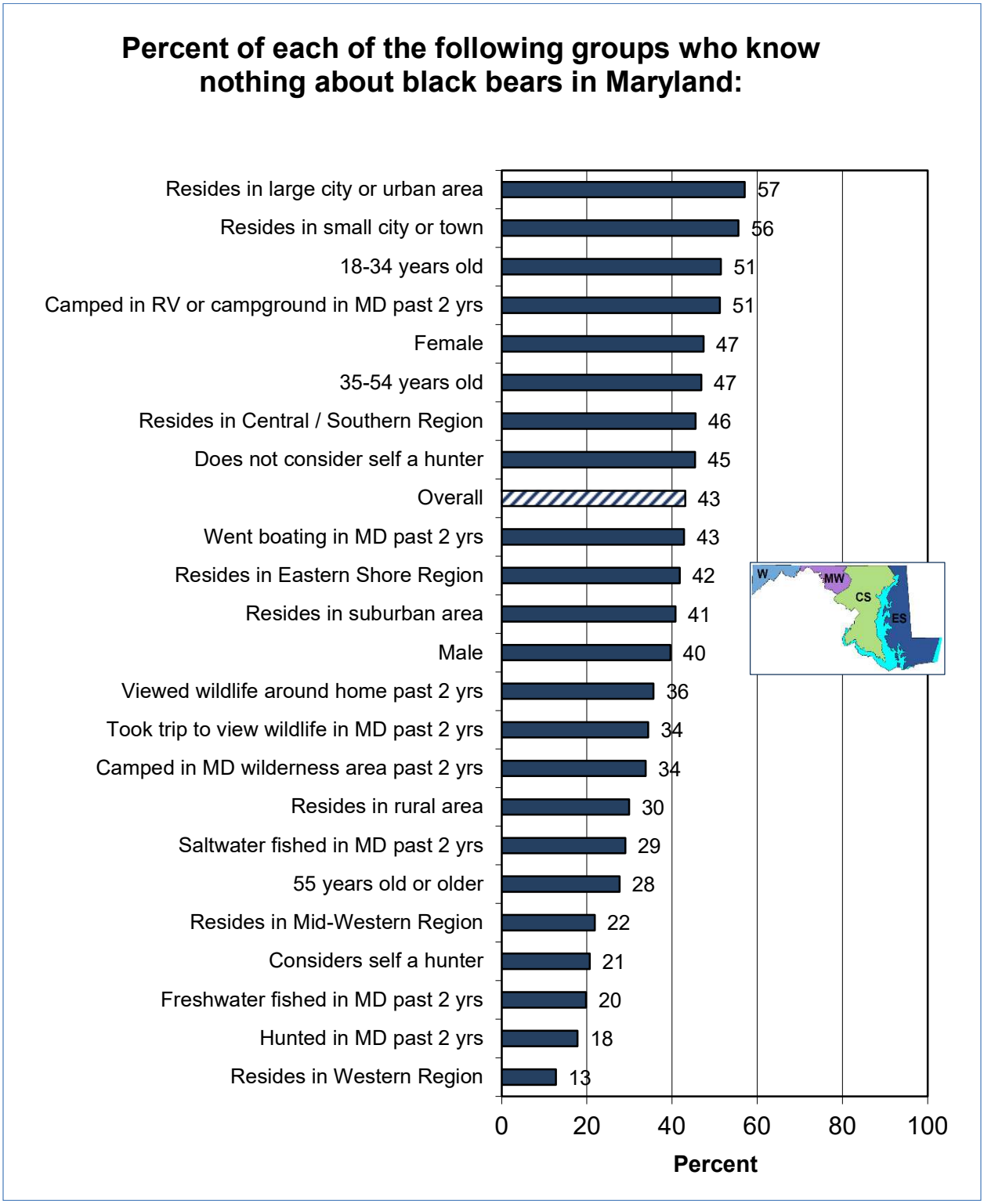


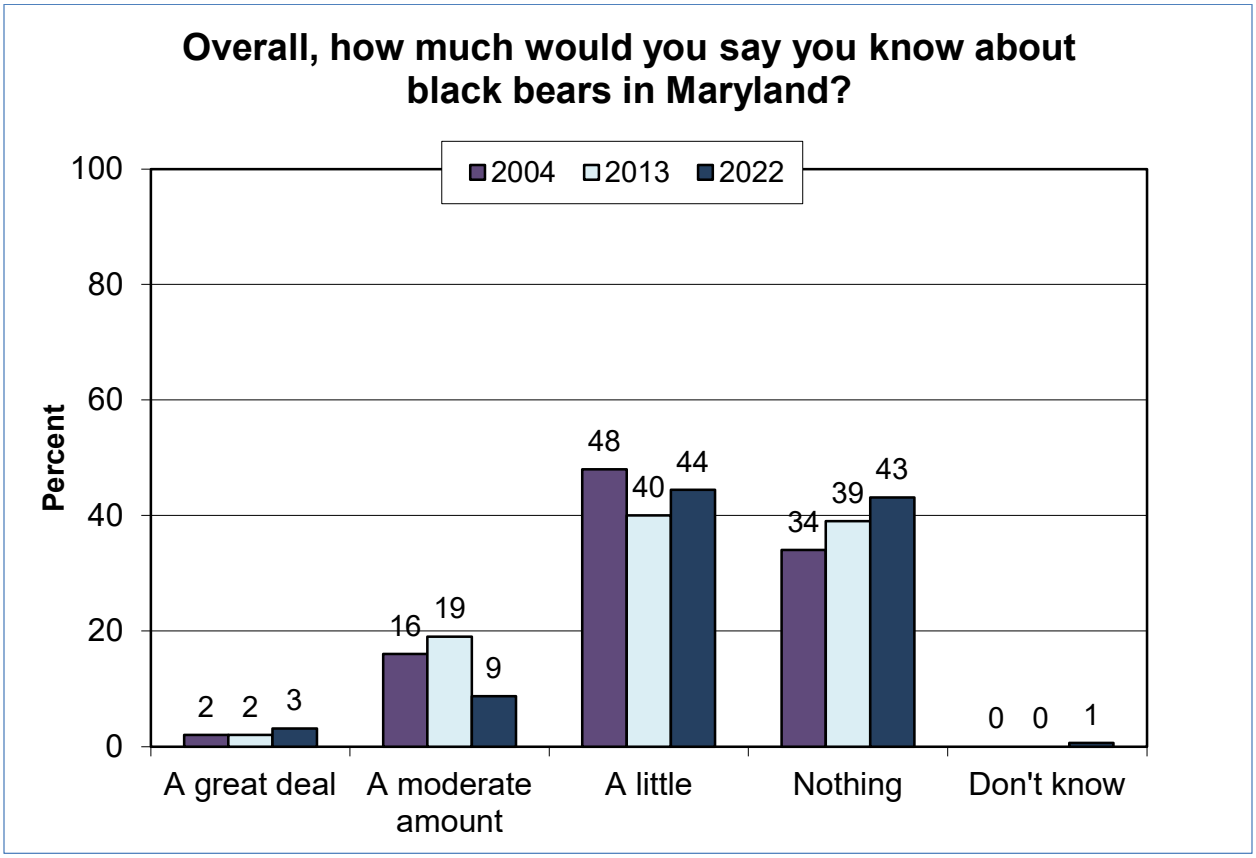


Western Region residents have the most knowledge about black bears, followed by self-identified hunters; those who hunted, fished, and camped in wilderness areas in the past 2 years; and Mid-Western Region residents.

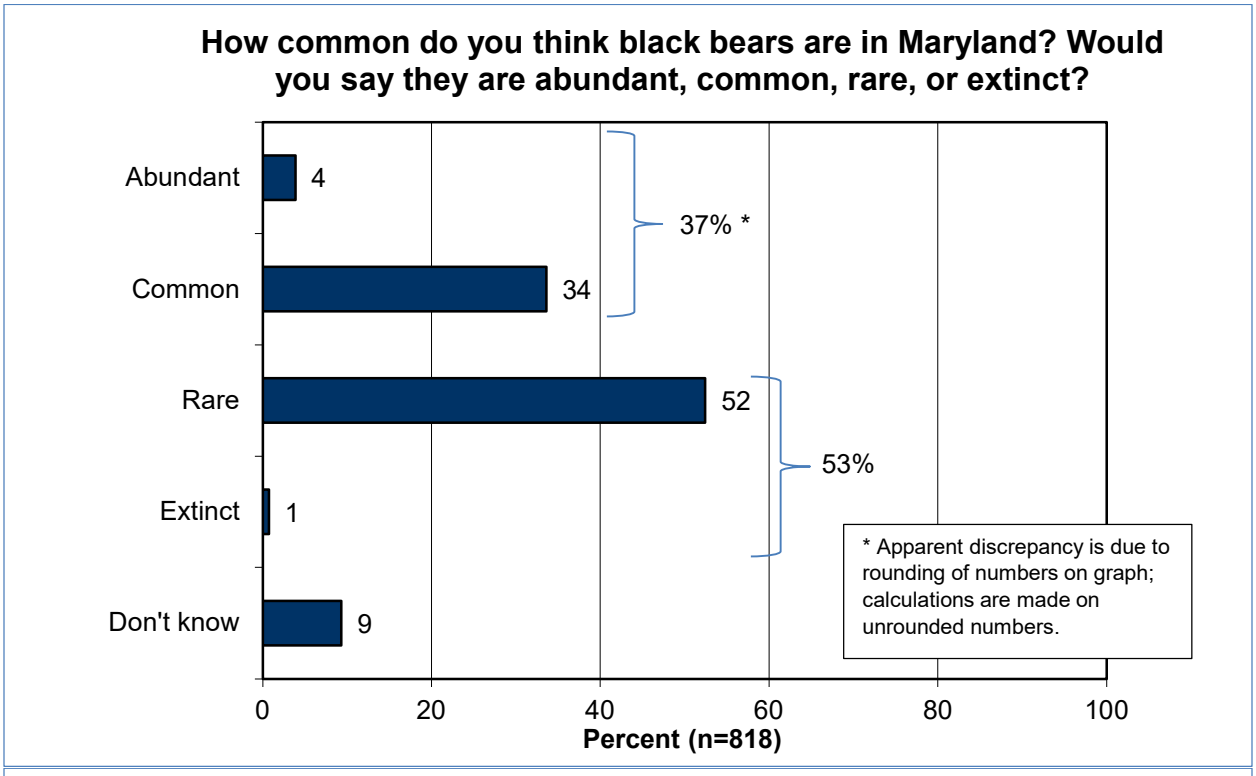


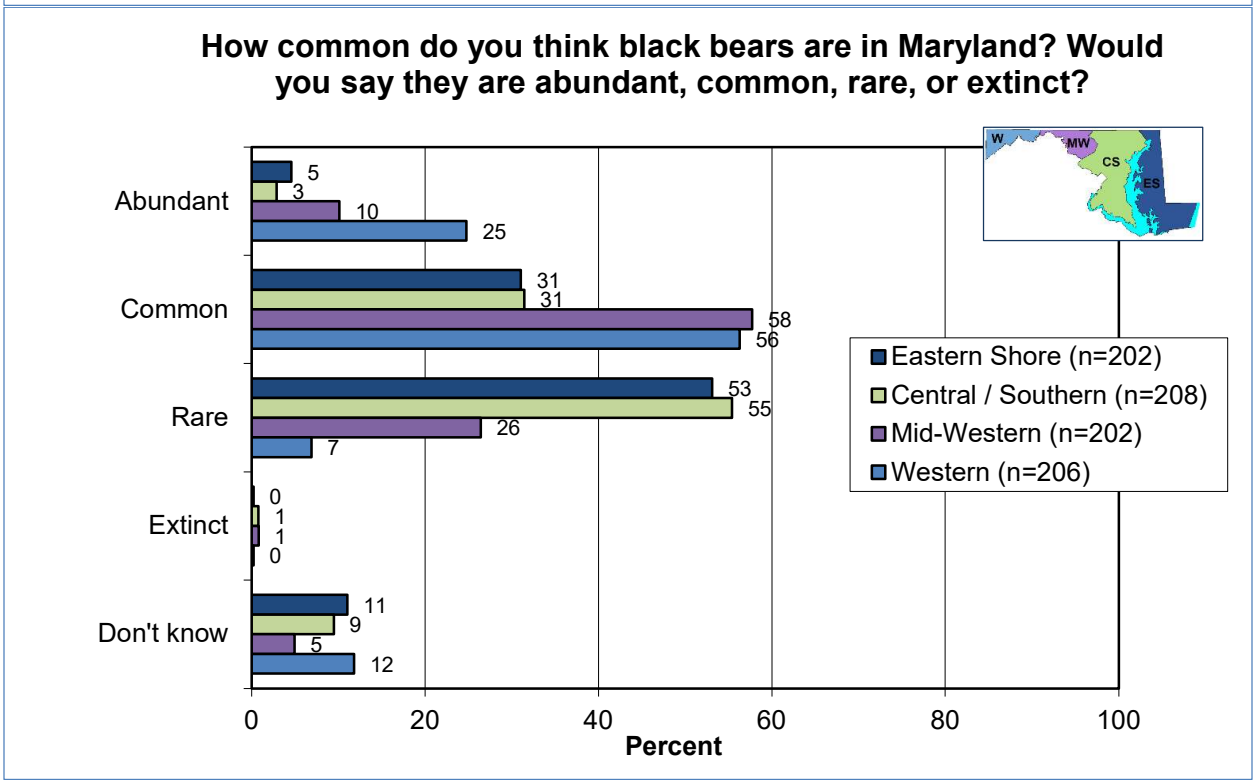
Large city and small city or town residents were the most likely to know *nothing* about black bears in Maryland.



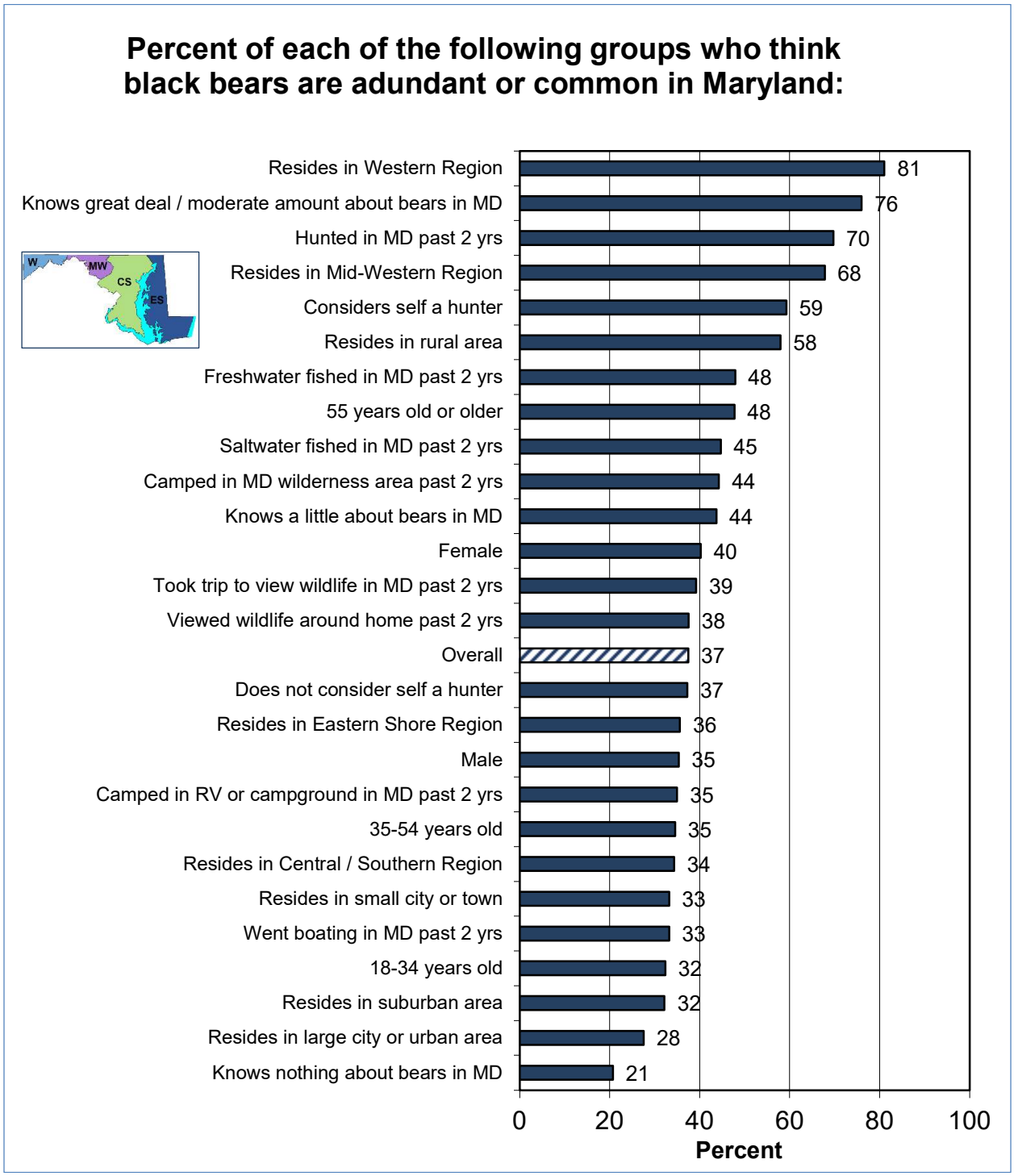

Overall, how much would you say you know about black bears in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
2 2 3
16 19 9
48 40 44
34 39 43
0 0 1
A great deal
A moderate amount
A little
Nothing
Don't know

A slight majority of residents (52%) think black bears are *rare* in Maryland, while 4% think they are *abundant* and 34% think they are *common*.

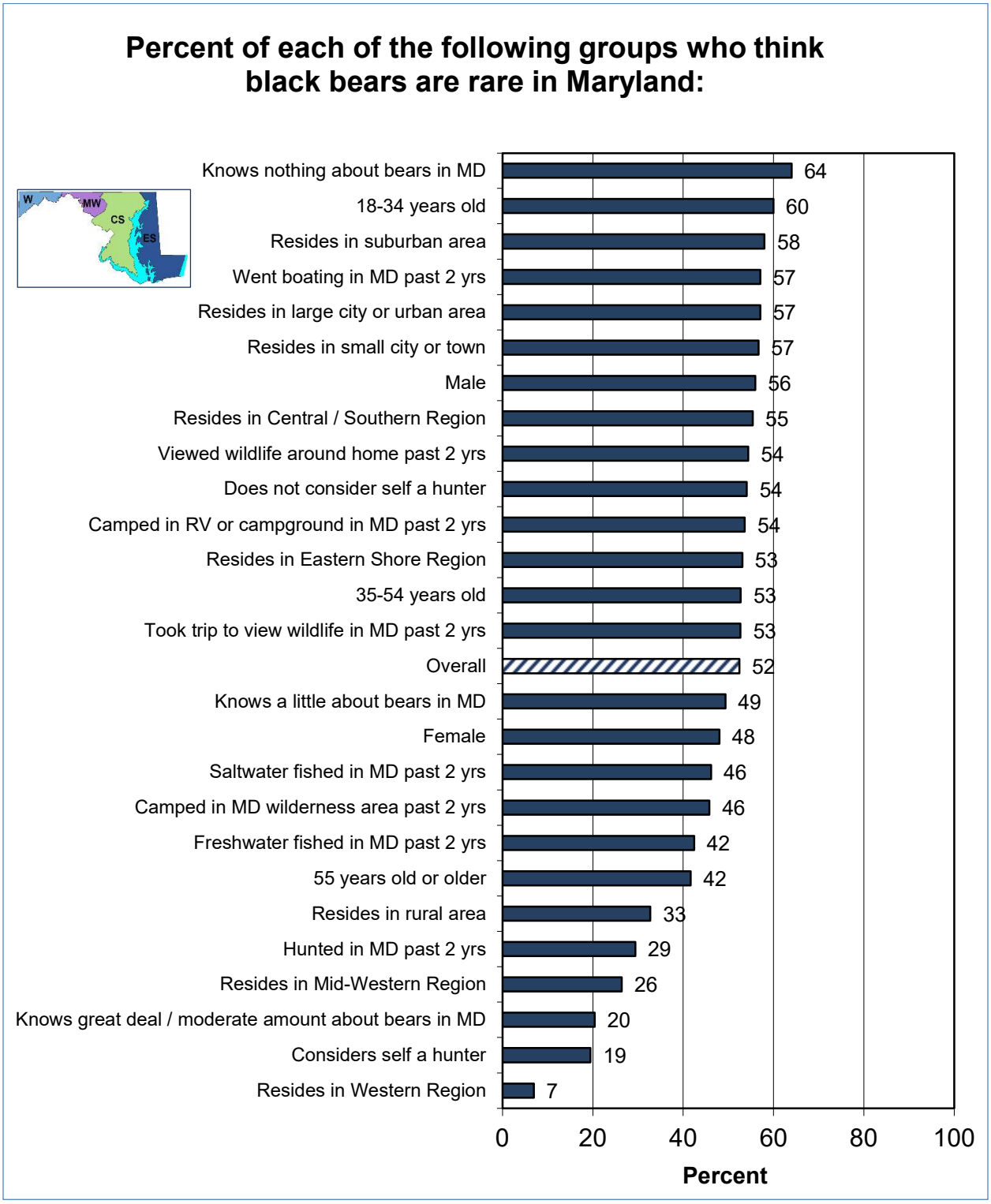


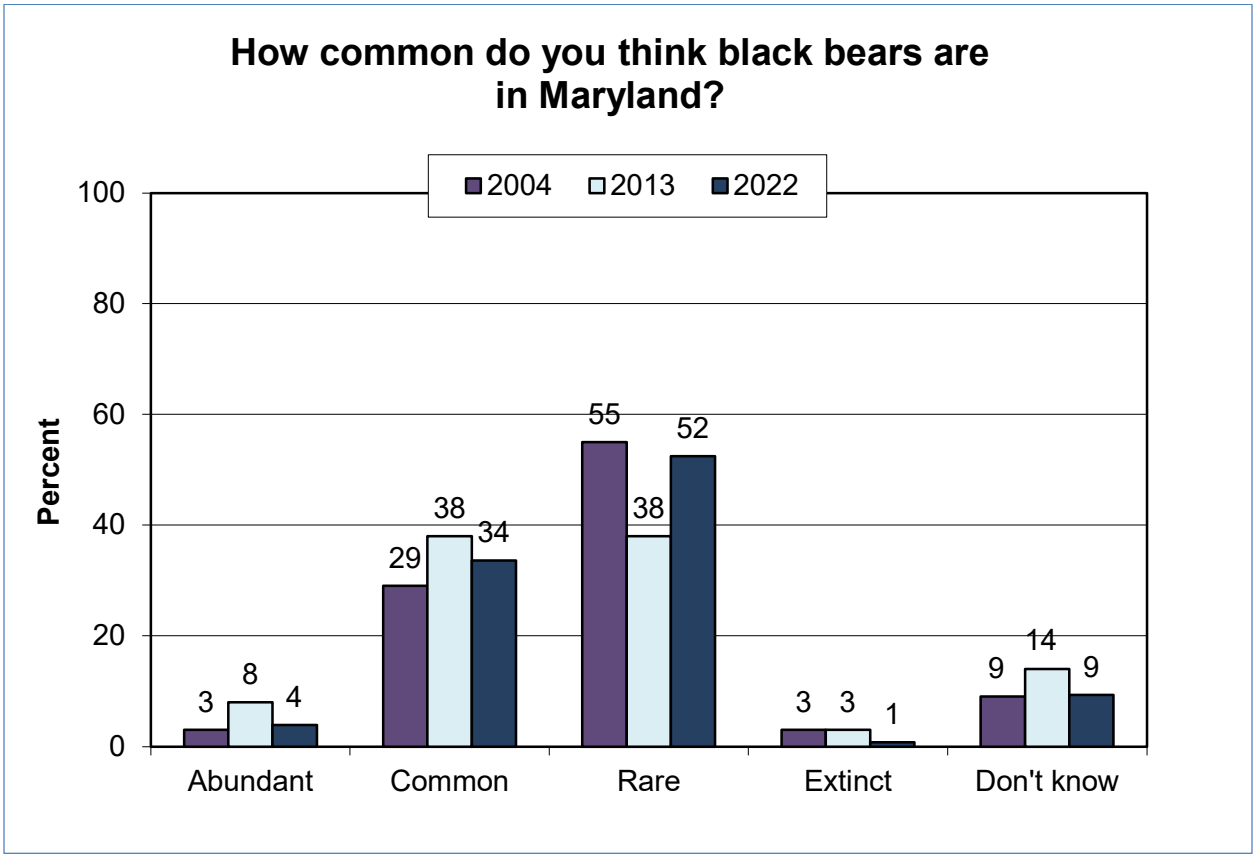


The groups most likely to say that bears are *abundant* or *common* include Western Region residents, those who know a great deal or moderate amount about bears, those who hunted in the past 2 years or consider themselves to be a hunter, Mid-Western Region residents, and rural residents.

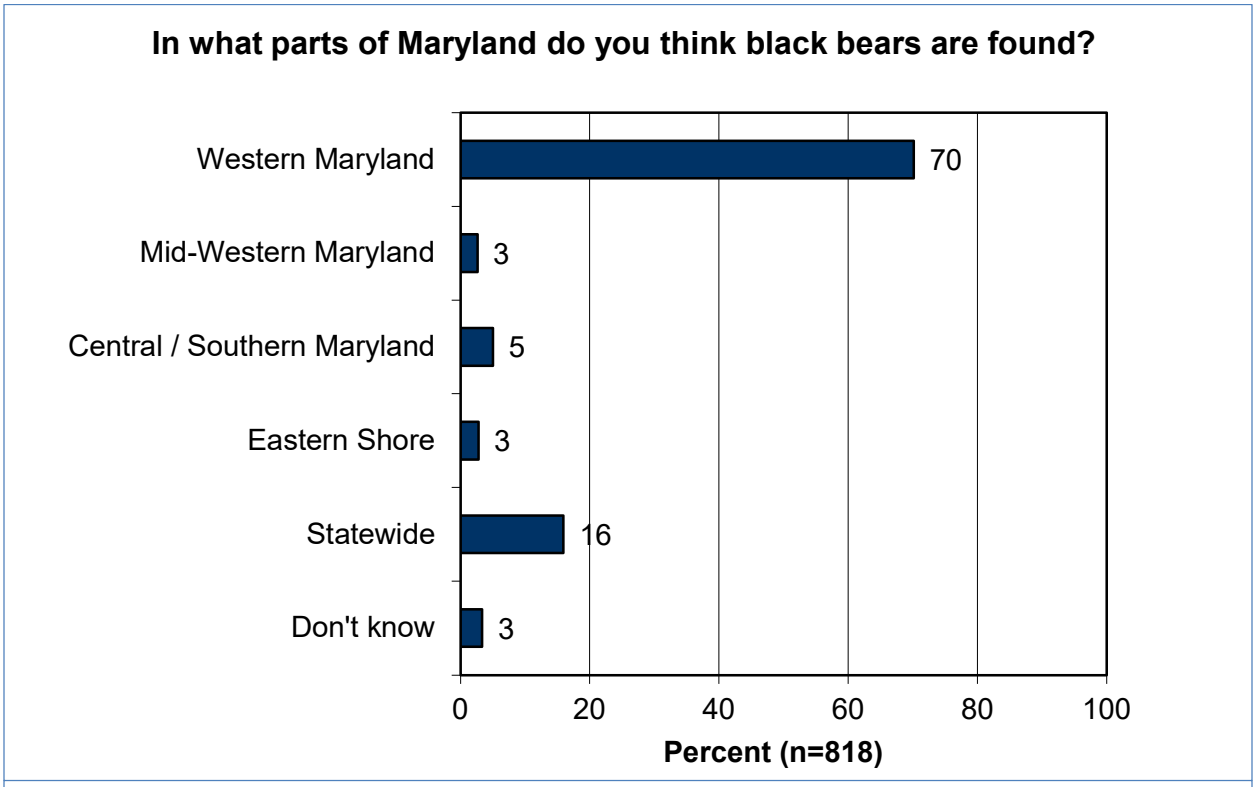


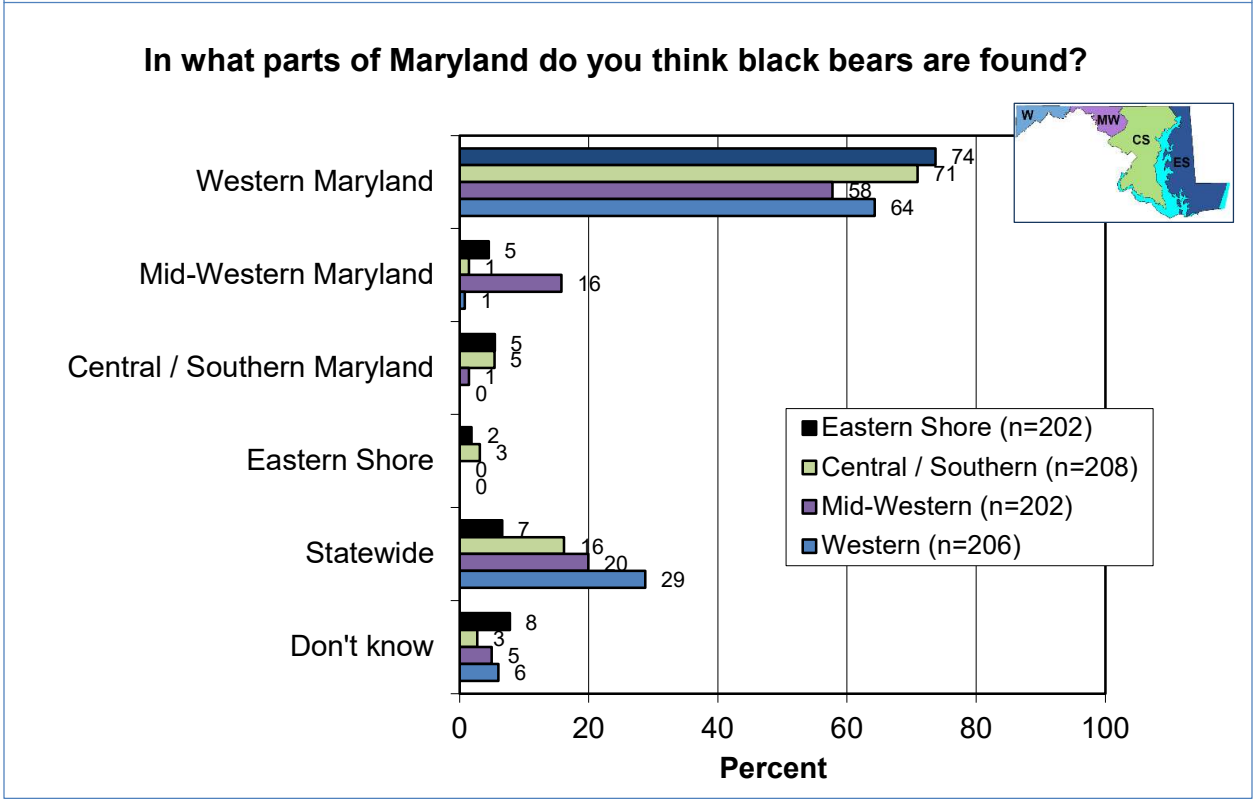
Those who know nothing about bears, younger residents, and suburban residents are the groups most likely to think black bears are *rare* in Maryland.




How common do you think black bears are in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
3
8
4
29
38
34
55
38
52
3
3
1
9
14
9
Abundant
Common
Rare
Extinct
Don't know

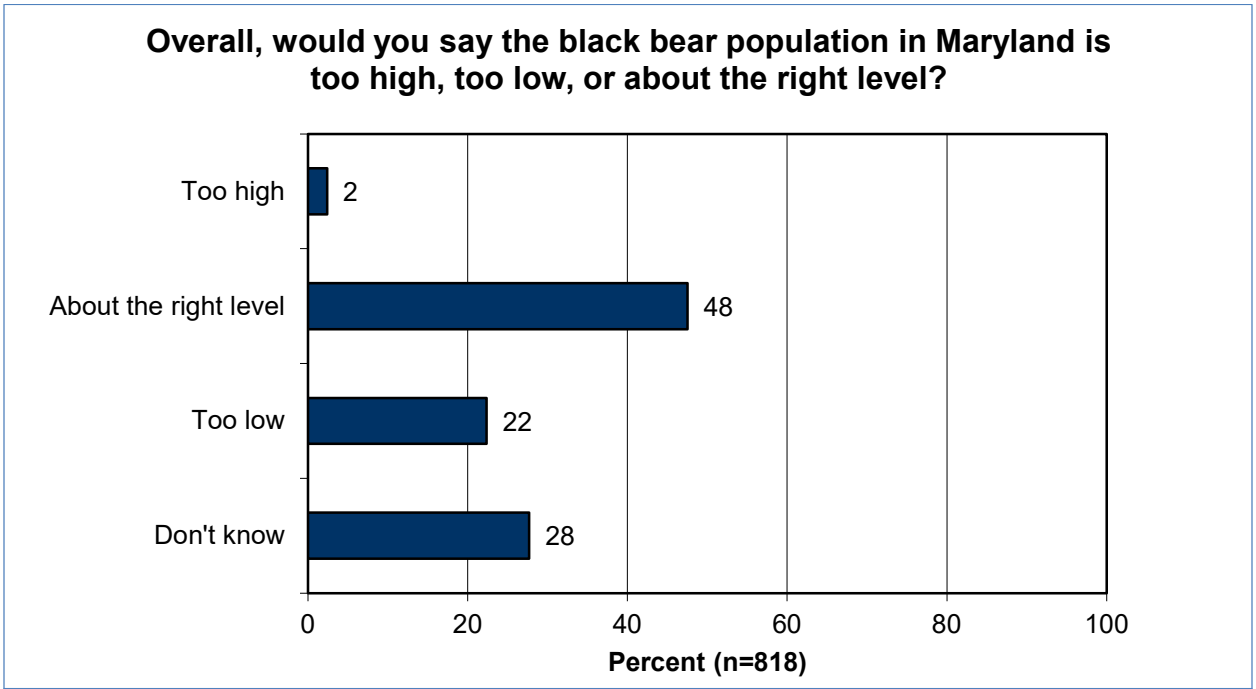
A majority of residents (70%) think black bears are found in Western Maryland, while 16% think bears are distributed throughout the state. Western Region residents are the ones most likely to think bears are distributed statewide. (Black bears are mostly found in the Western and Mid-Western Regions.)

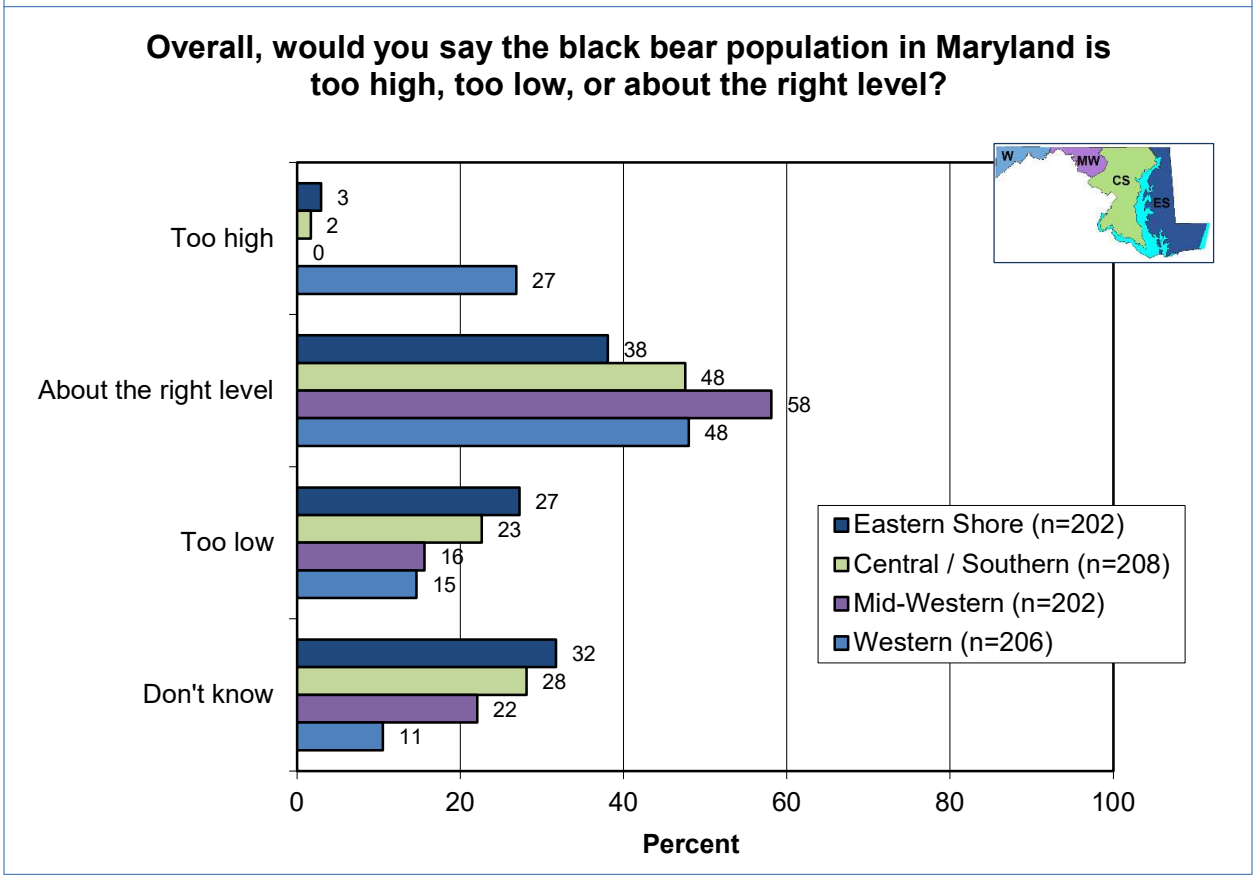




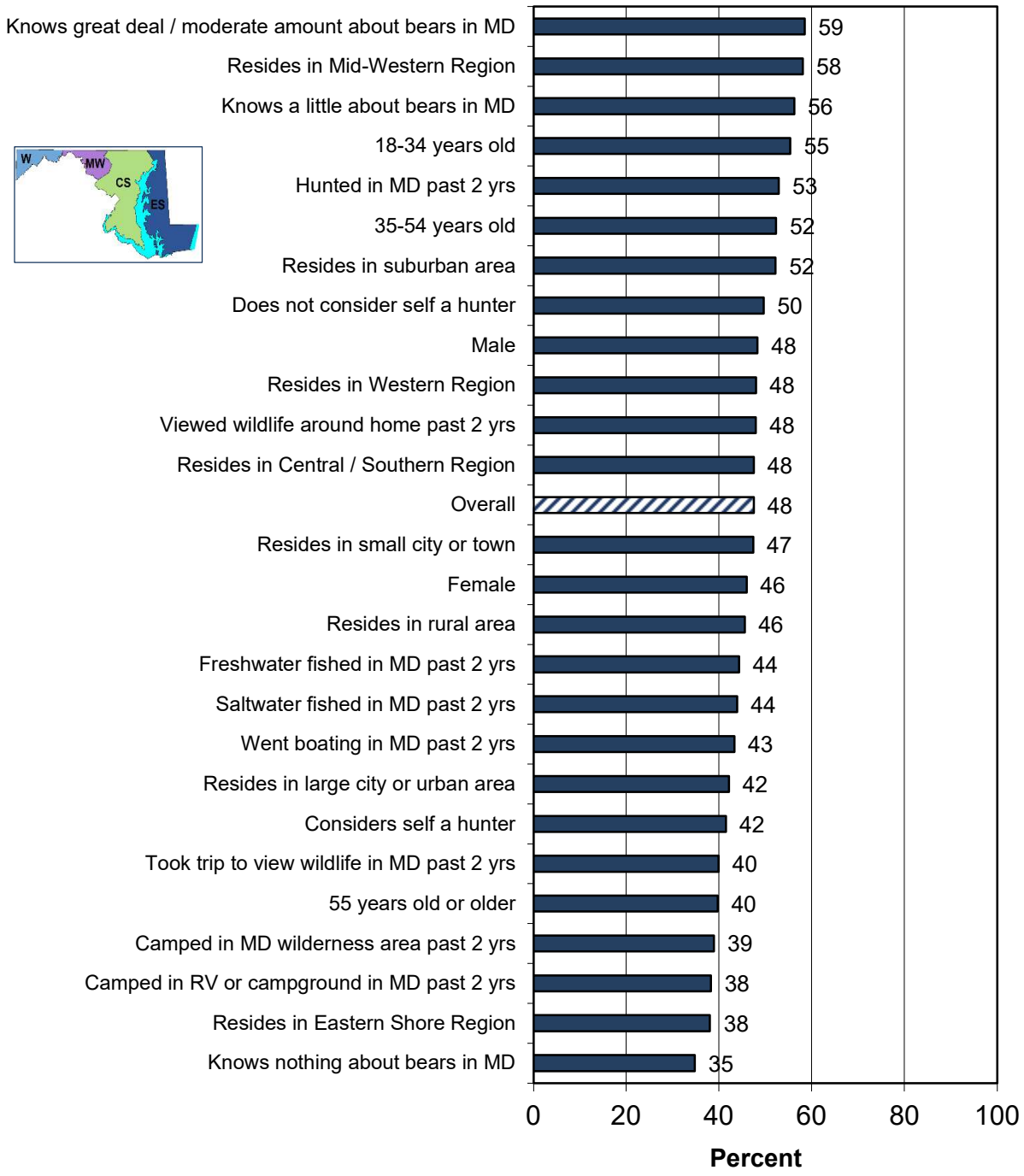
BLACK BEAR POPULATION

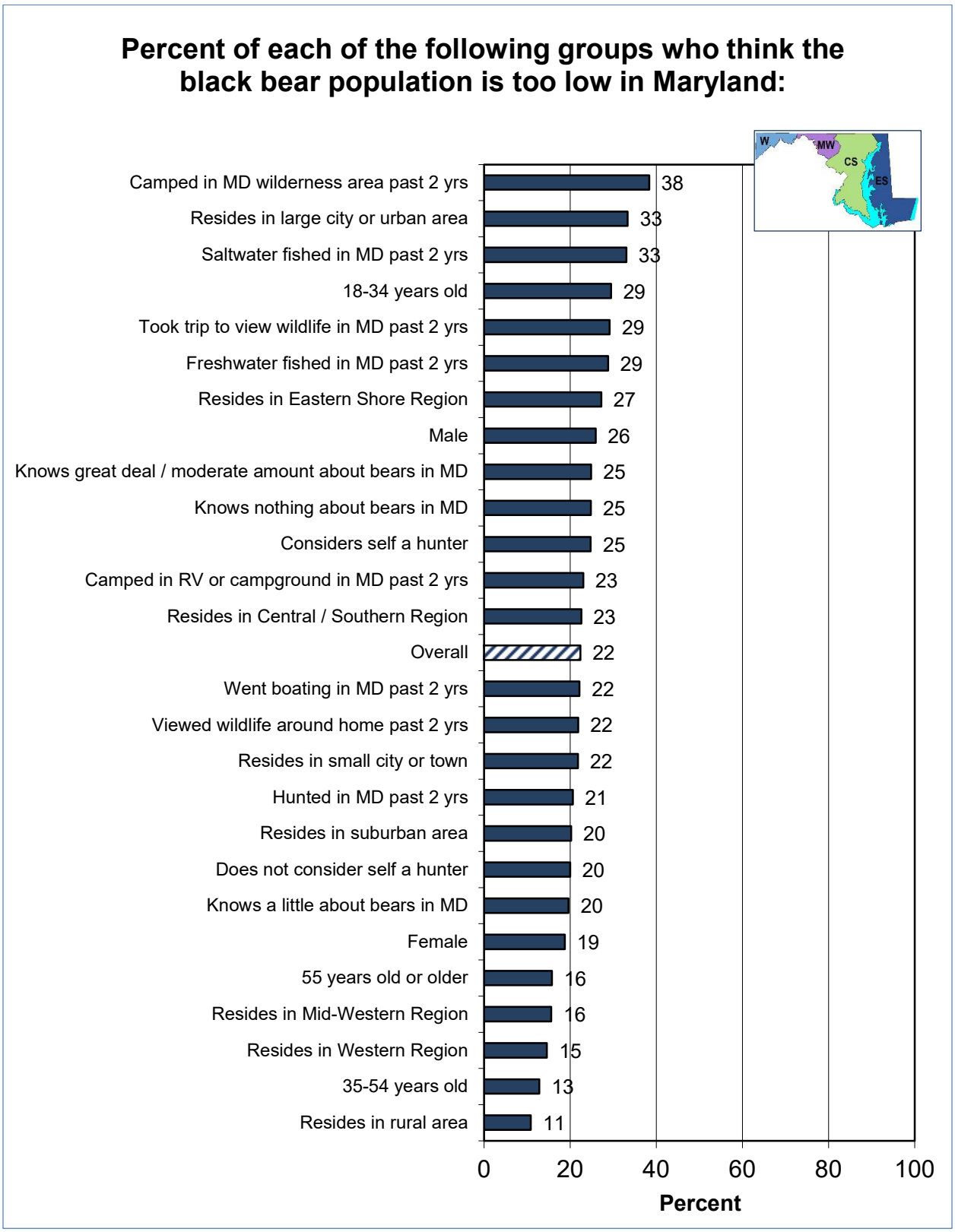
About half of residents (48%) said that the black bear population in Maryland is at *about the right level*, while many more said it is *too low* (22%) than *too high* (2%). Over a quarter (28%) did not know how to respond.

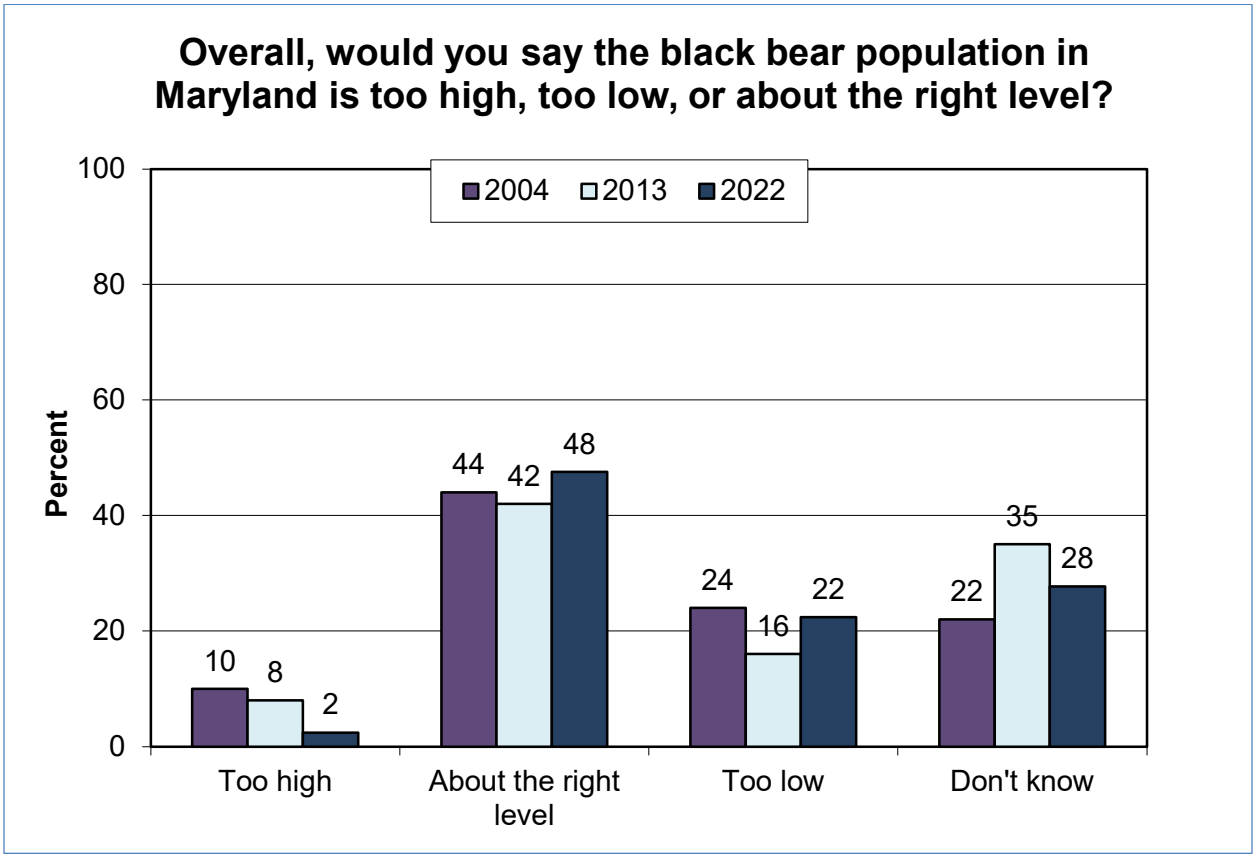




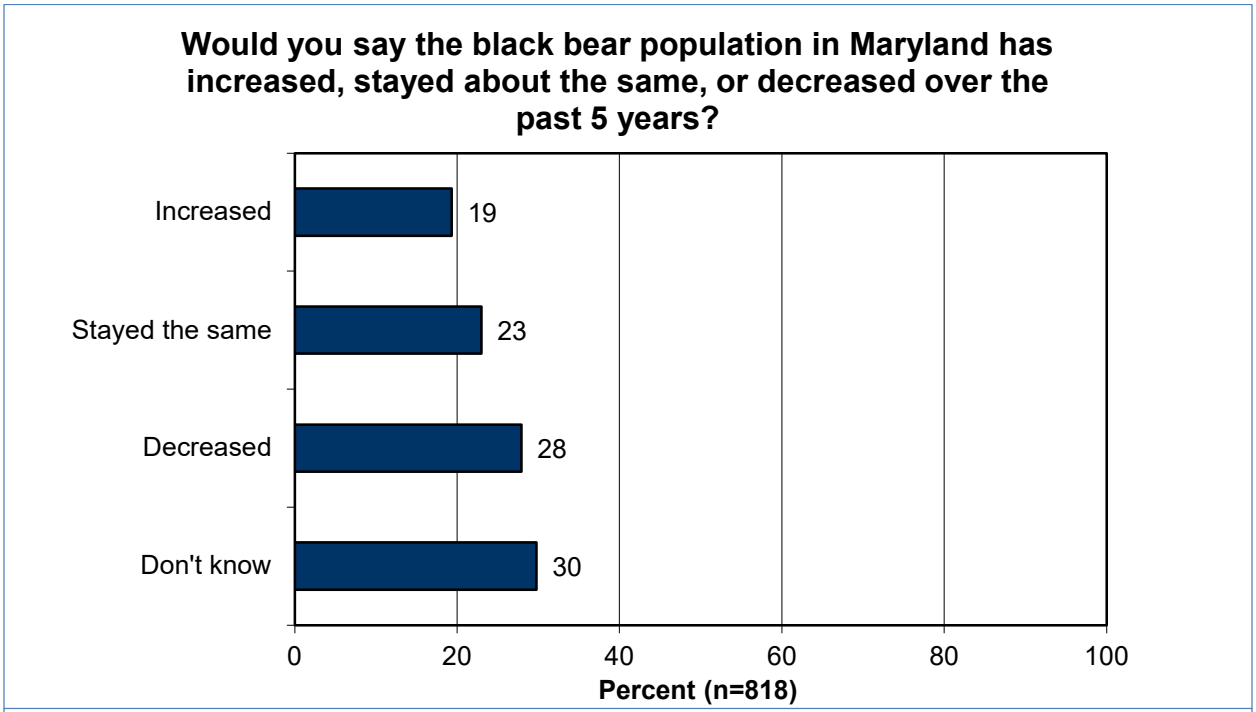
Percent of each of the following groups who think the black bear population is at about the right level in Maryland:

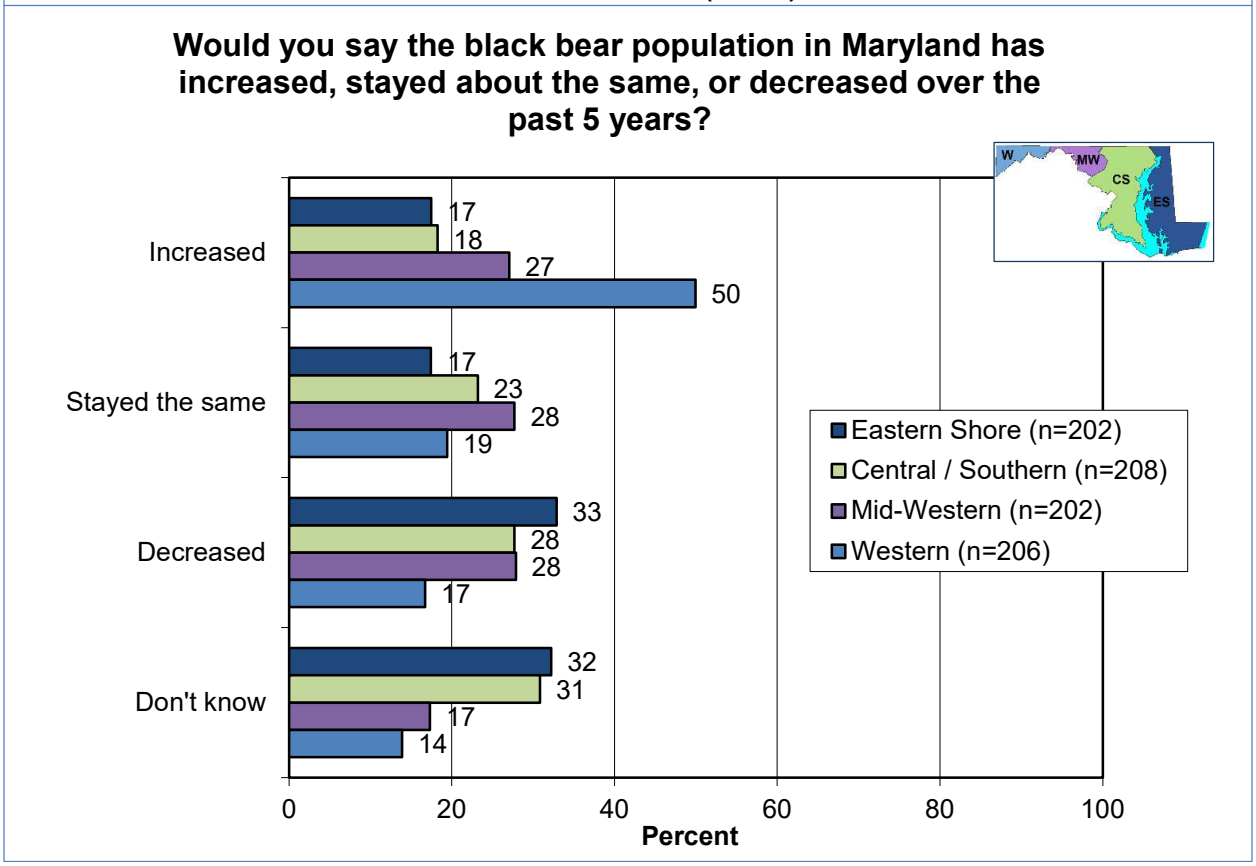



Percent of each of the following groups who think the black bear population is too low in Maryland:
W
MW
CS
ES
Camped in MD wilderness area past 2 yrs 38
Resides in large city or urban area 33
Saltwater fished in MD past 2 yrs 33
18-34 years old 29
Took trip to view wildlife in MD past 2 yrs 29
Freshwater fished in MD past 2 yrs 29
Resides in Eastern Shore Region 27
Male 26
Knows great deal / moderate amount about bears in MD 25
Knows nothing about bears in MD 25
Considers self a hunter 25
Camped in RV or campground in MD past 2 yrs 23
Resides in Central / Southern Region 23
Overall 22
Went boating in MD past 2 yrs 22
Viewed wildlife around home past 2 yrs 22
Resides in small city or town 22
Hunted in MD past 2 yrs 21
Resides in suburban area 20
Does not consider self a hunter 20
Knows a little about bears in MD 20
Female 19
55 years old or older 16
Resides in Mid-Western Region 16
Resides in Western Region 15
35-54 years old 13
Resides in rural area 11
0 20 40 60 80 100
Percent


Overall, would you say the black bear population in Maryland is too high, too low, or about the right level?
2004
2013
2022
Percent
100
80
60
40
20
0
10
8
2
44
42
48
24
16
22
22
35
28
Too high
About the right level
Too low
Don't know

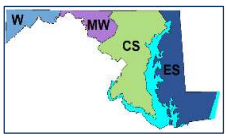
Residents were asked how they thought the black bear population in Maryland changed over the past 5 years, and the results are divided: 19% said it *increased*, 23% said it *stayed the same*, and 28% said it *decreased*. The top response was *don't know* at 30%.



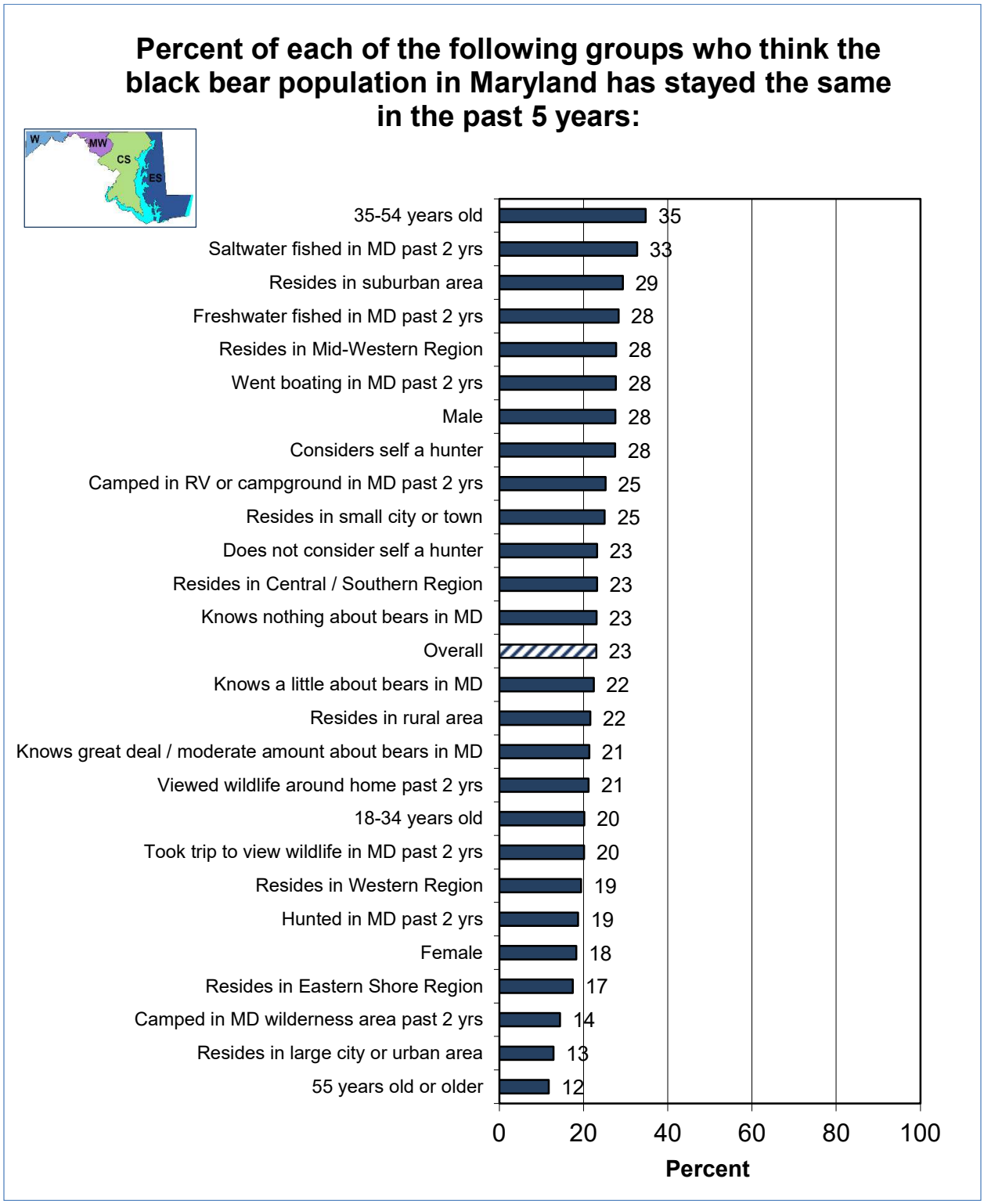


Those who hunted in the past 2 years and Western Region residents were the groups most likely to say the population has *increased*.

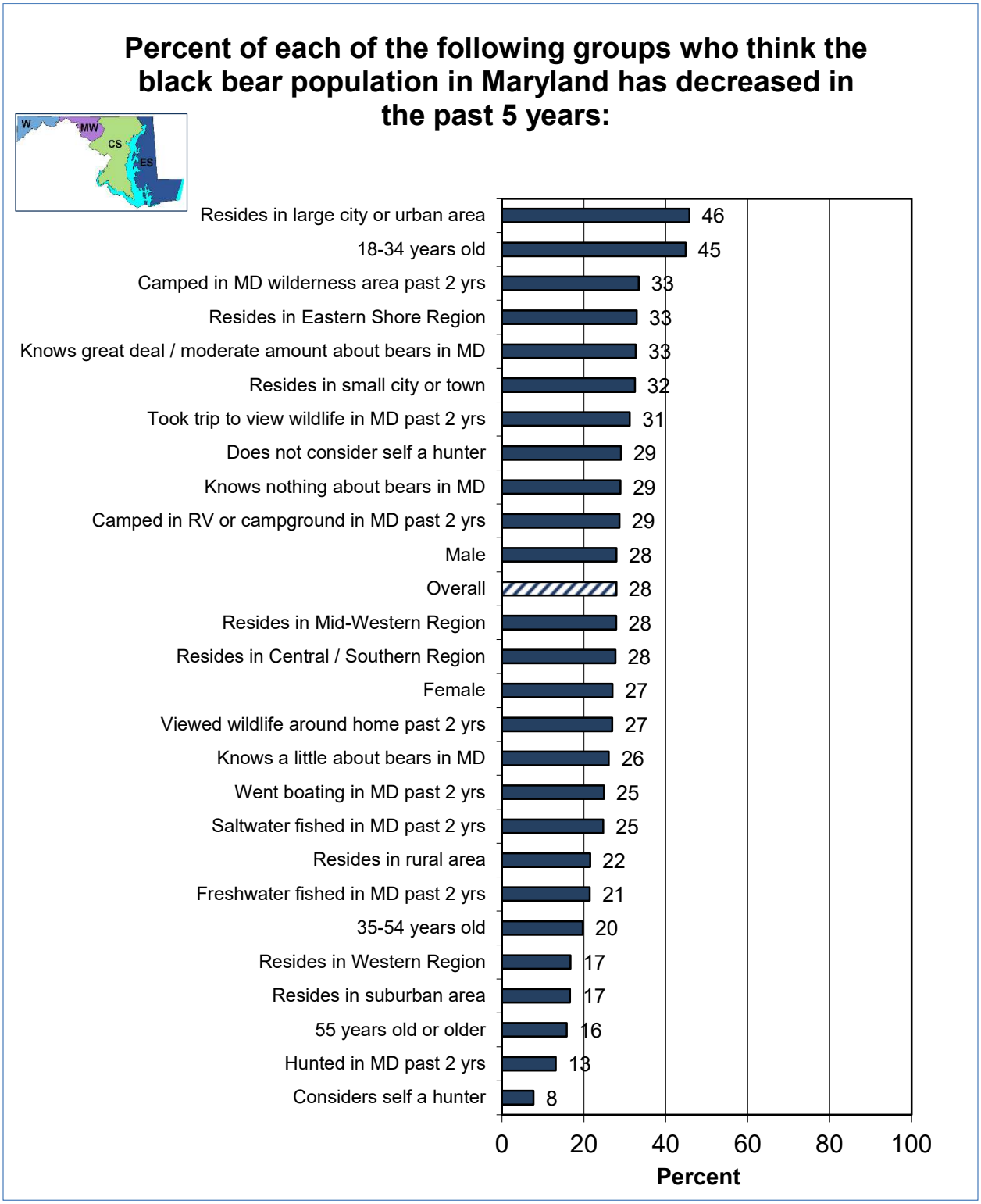
Percent of each of the following groups who think the black bear population in Maryland has increased in the past 5 years:

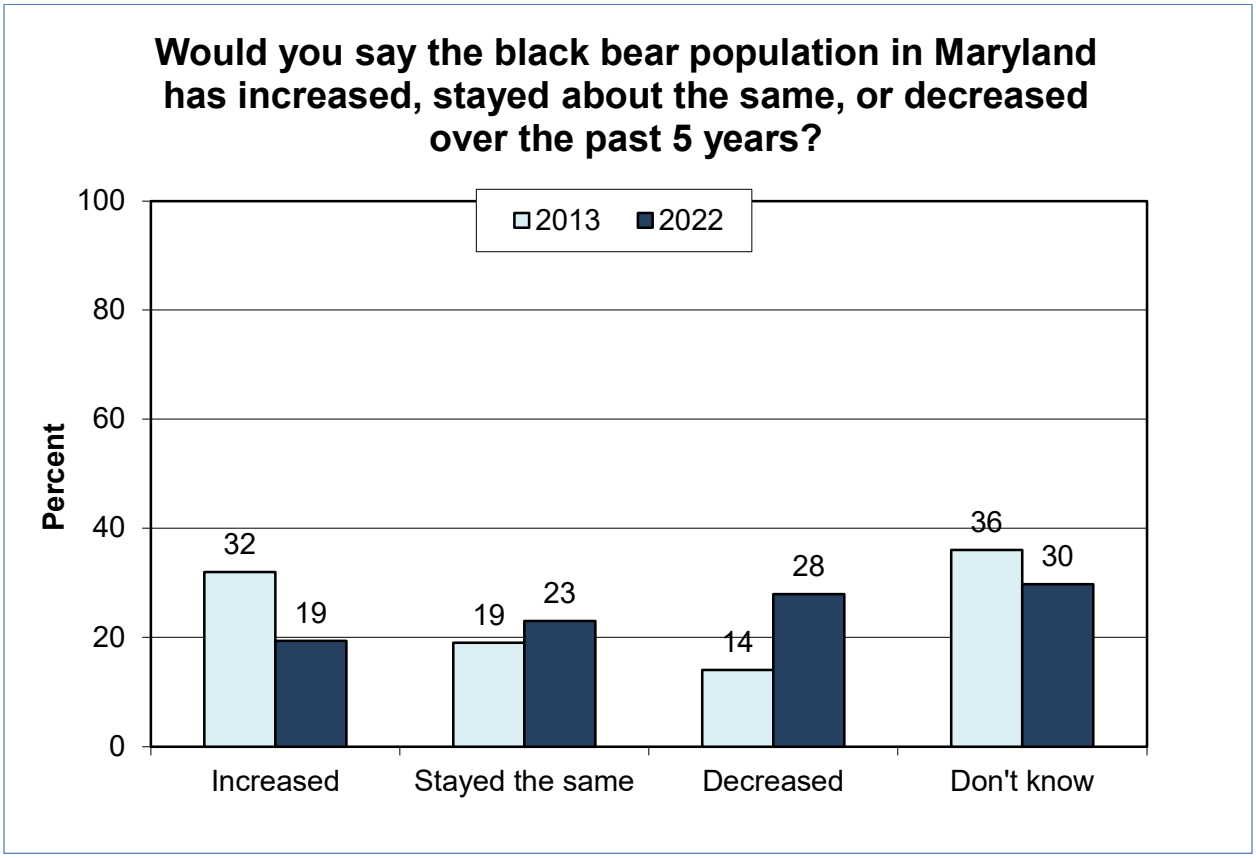


Those in the middle age category and those who saltwater fished in the past 2 years were the groups most likely to say the population has *stayed the same*.



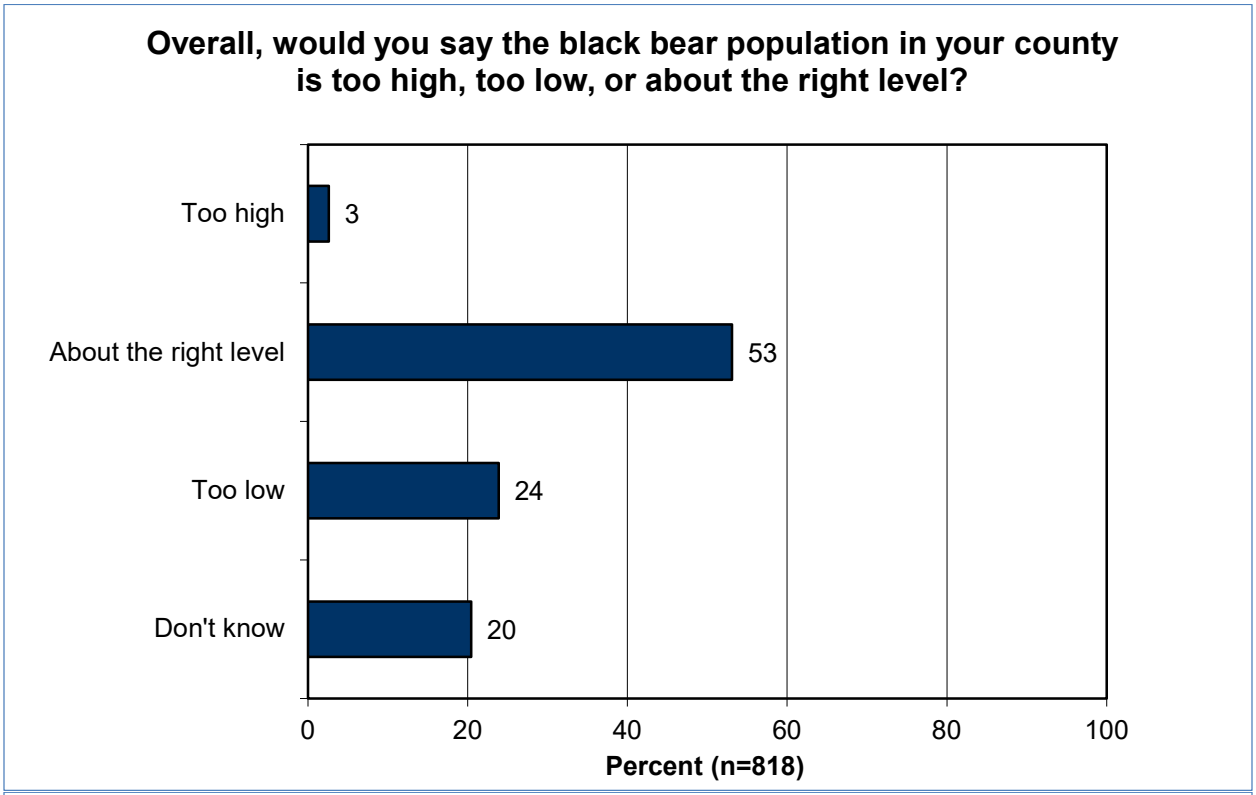
Large city residents and younger residents were the groups most likely to say the population has *decreased*.

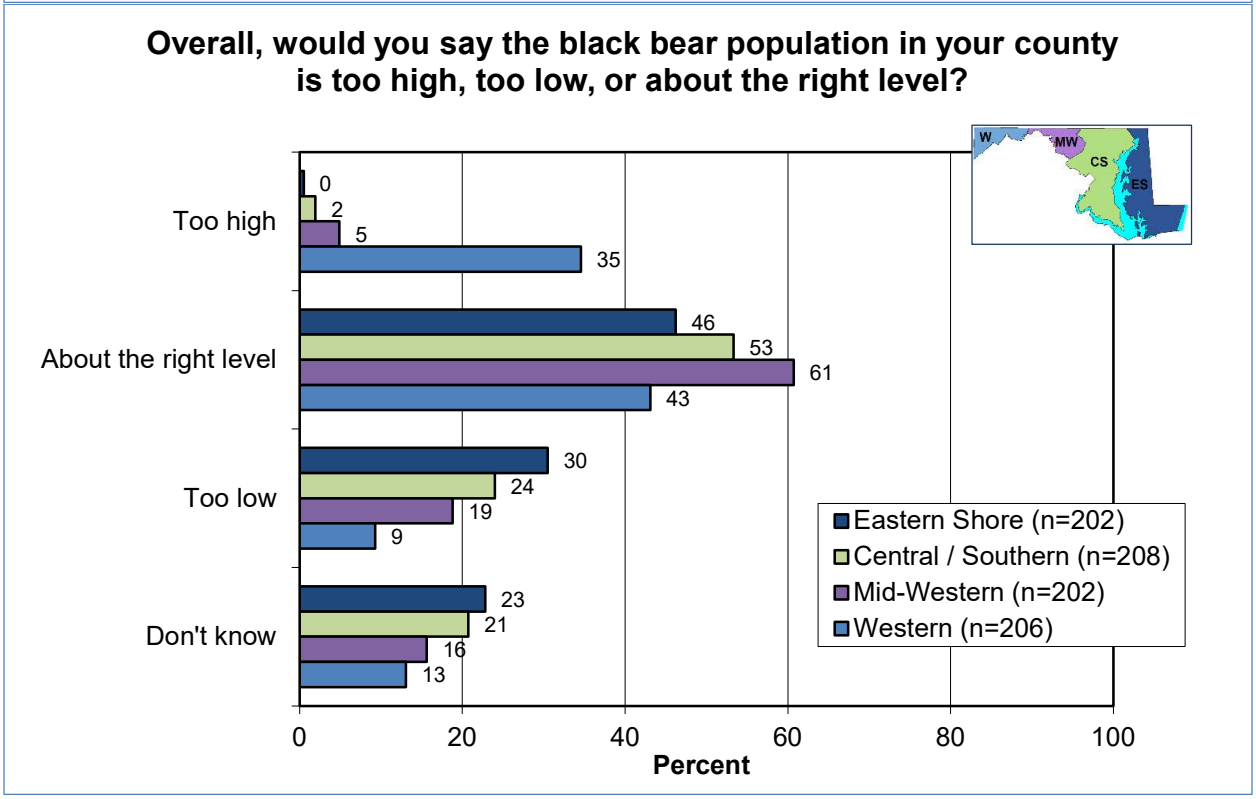




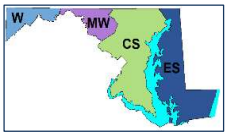
This question was not included in the 2004 survey.

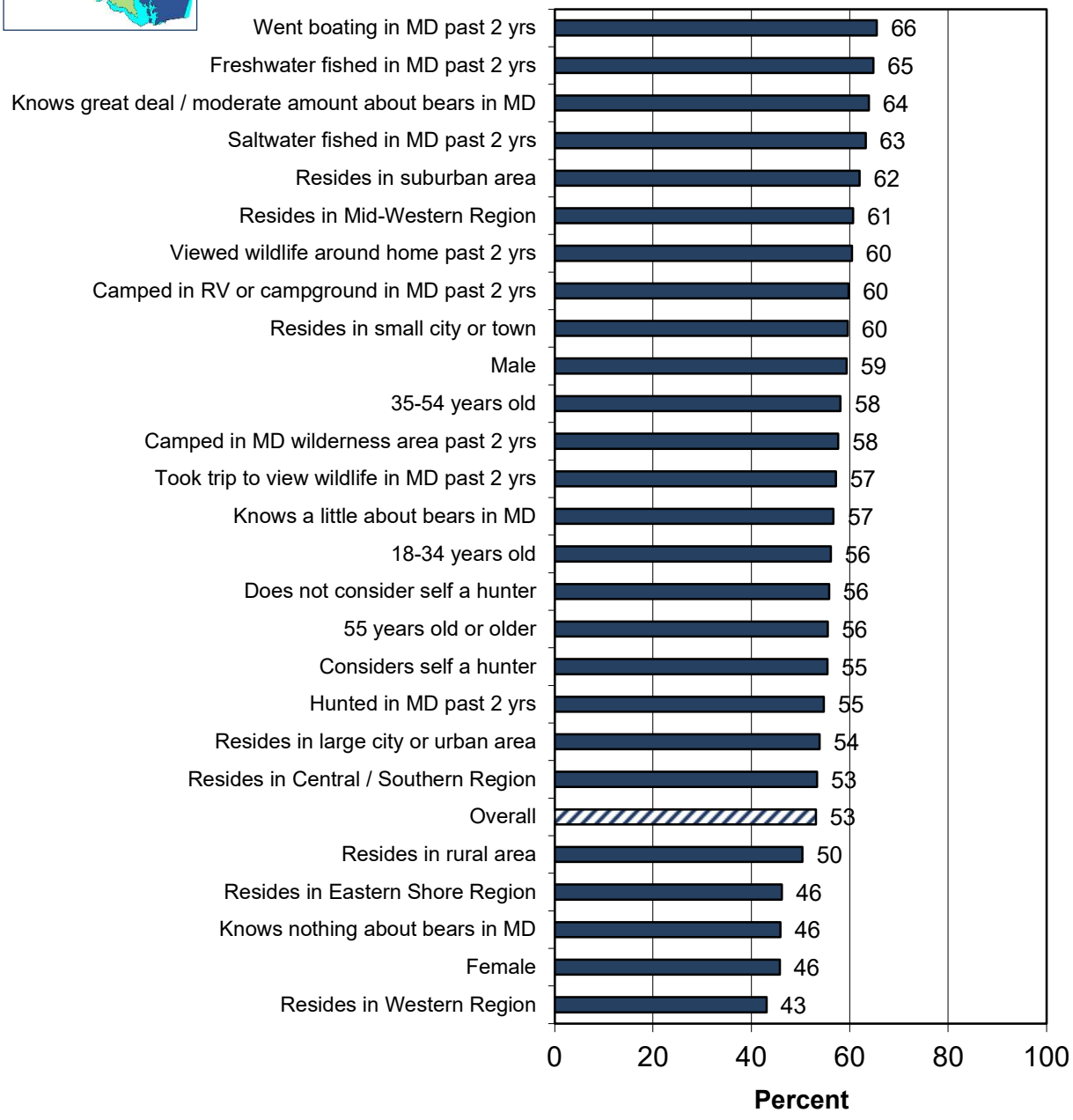
Just over half of residents (53%) said that the black bear population in their county is at *about the right level*, while many more said it is *too low* (24%) than *too high* (3%); 20% did not know.



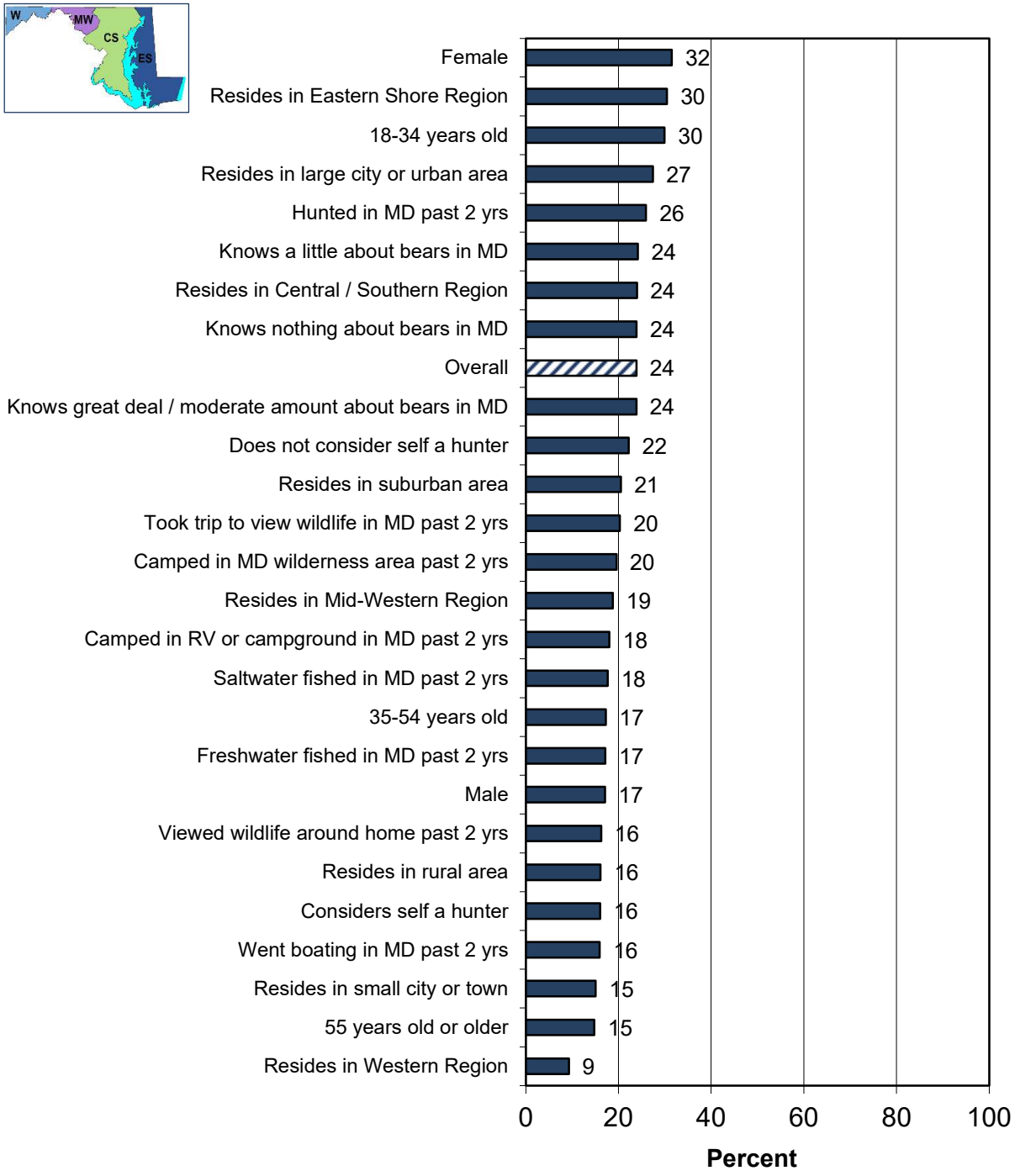


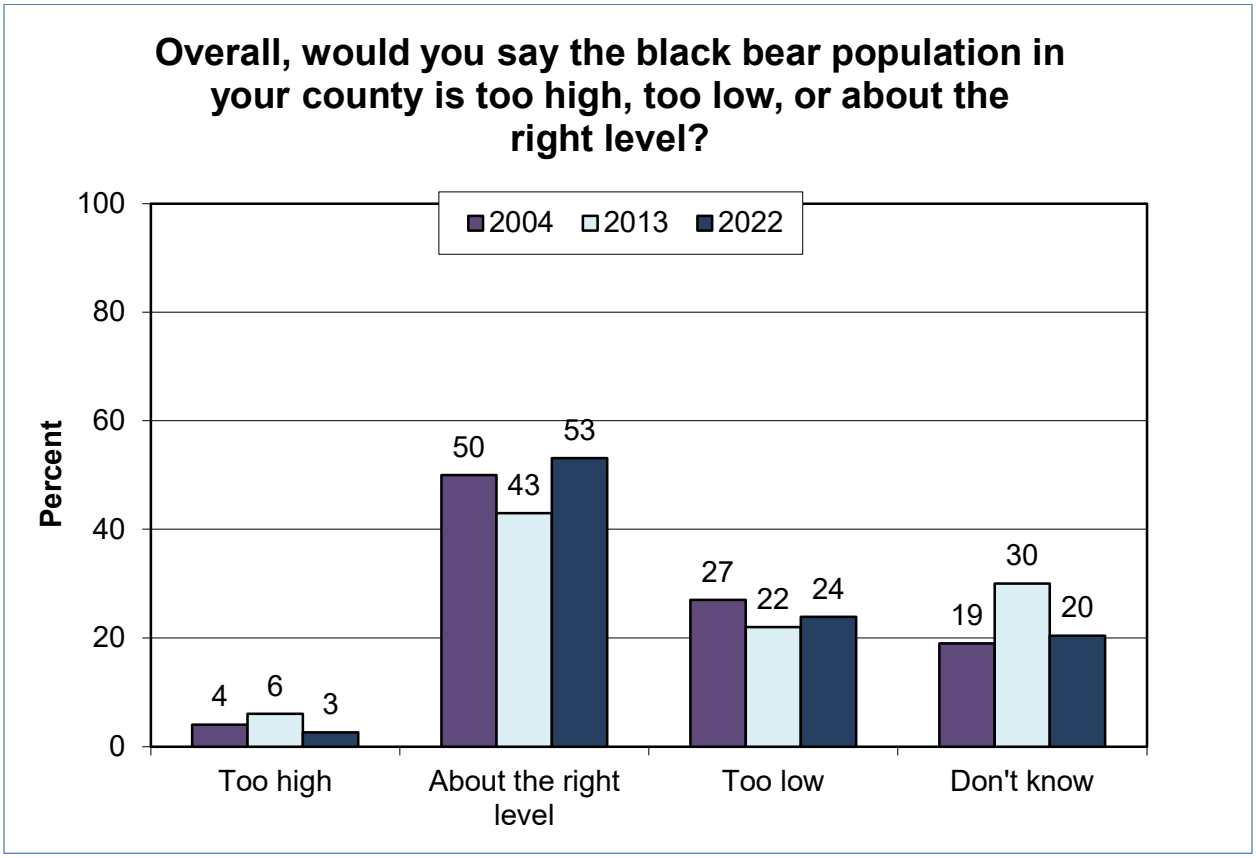
Percent of each of the following groups who think the black bear population is at about the right level in their county:



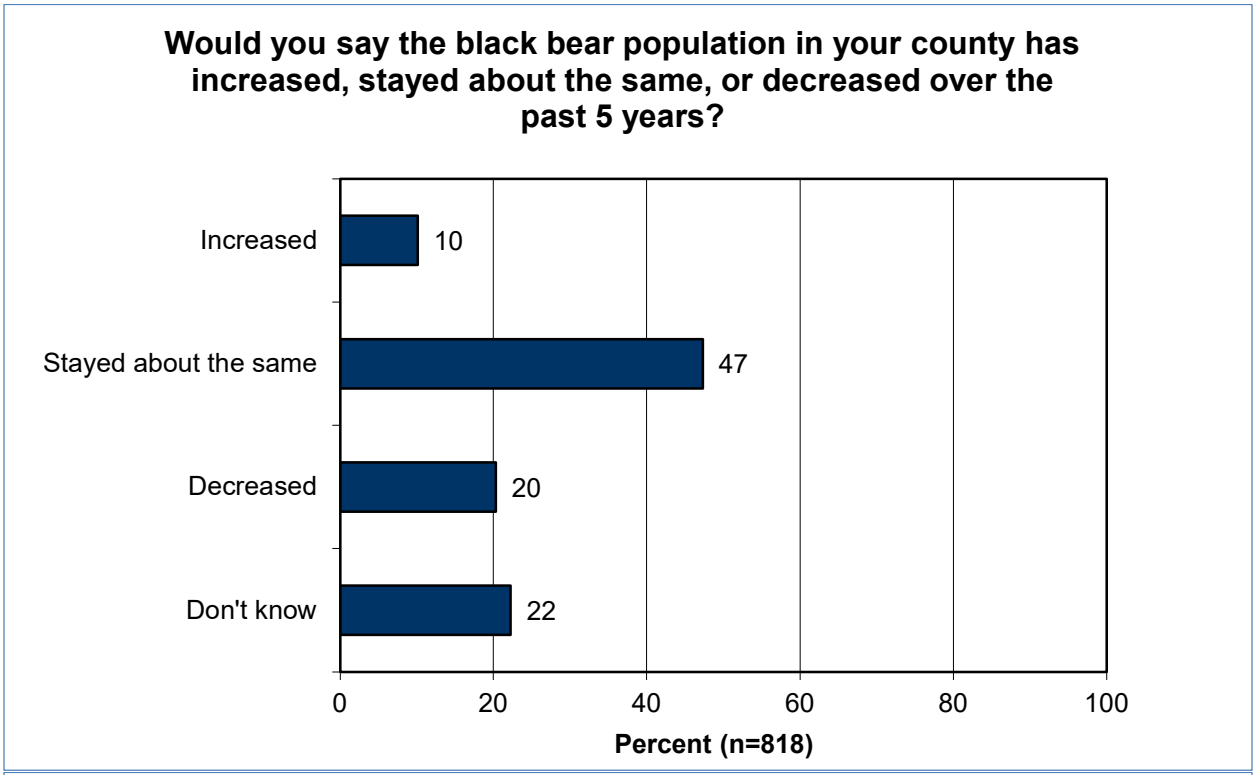


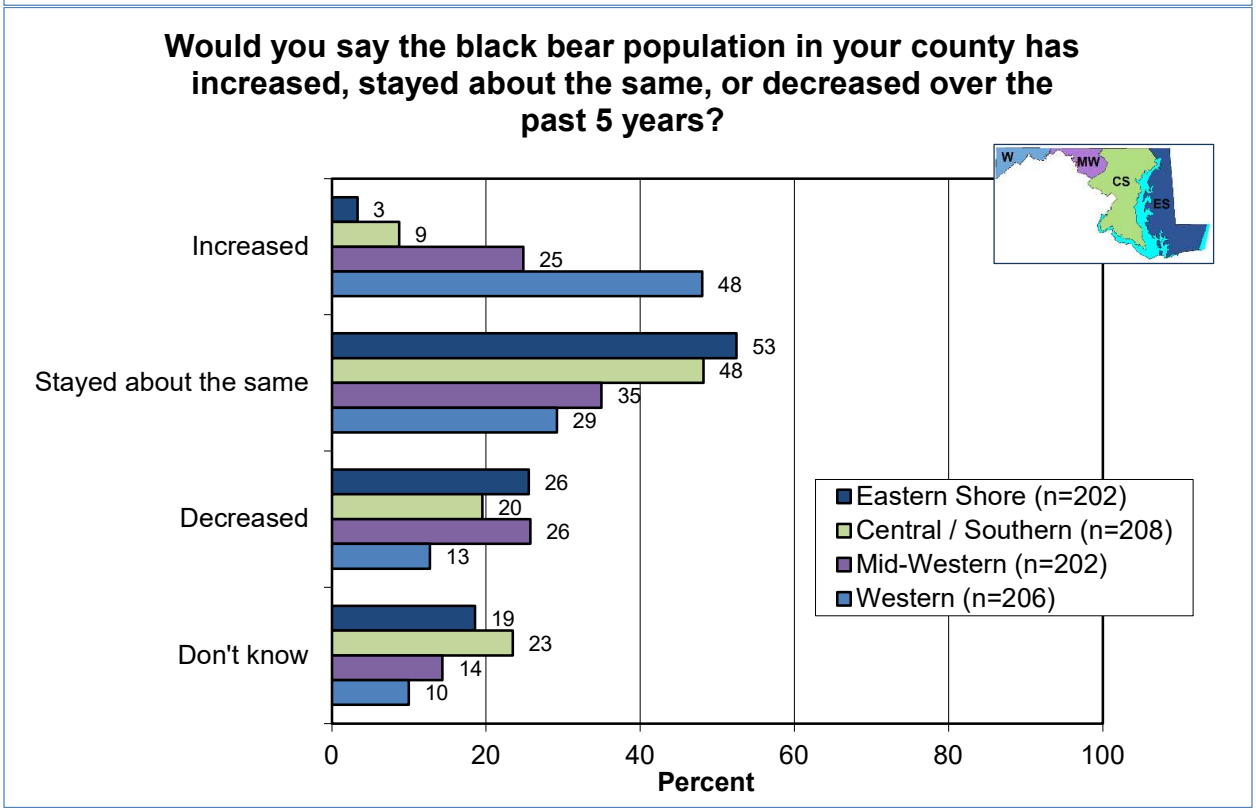
Percent of each of the following groups who think the black bear population is too low in their county:



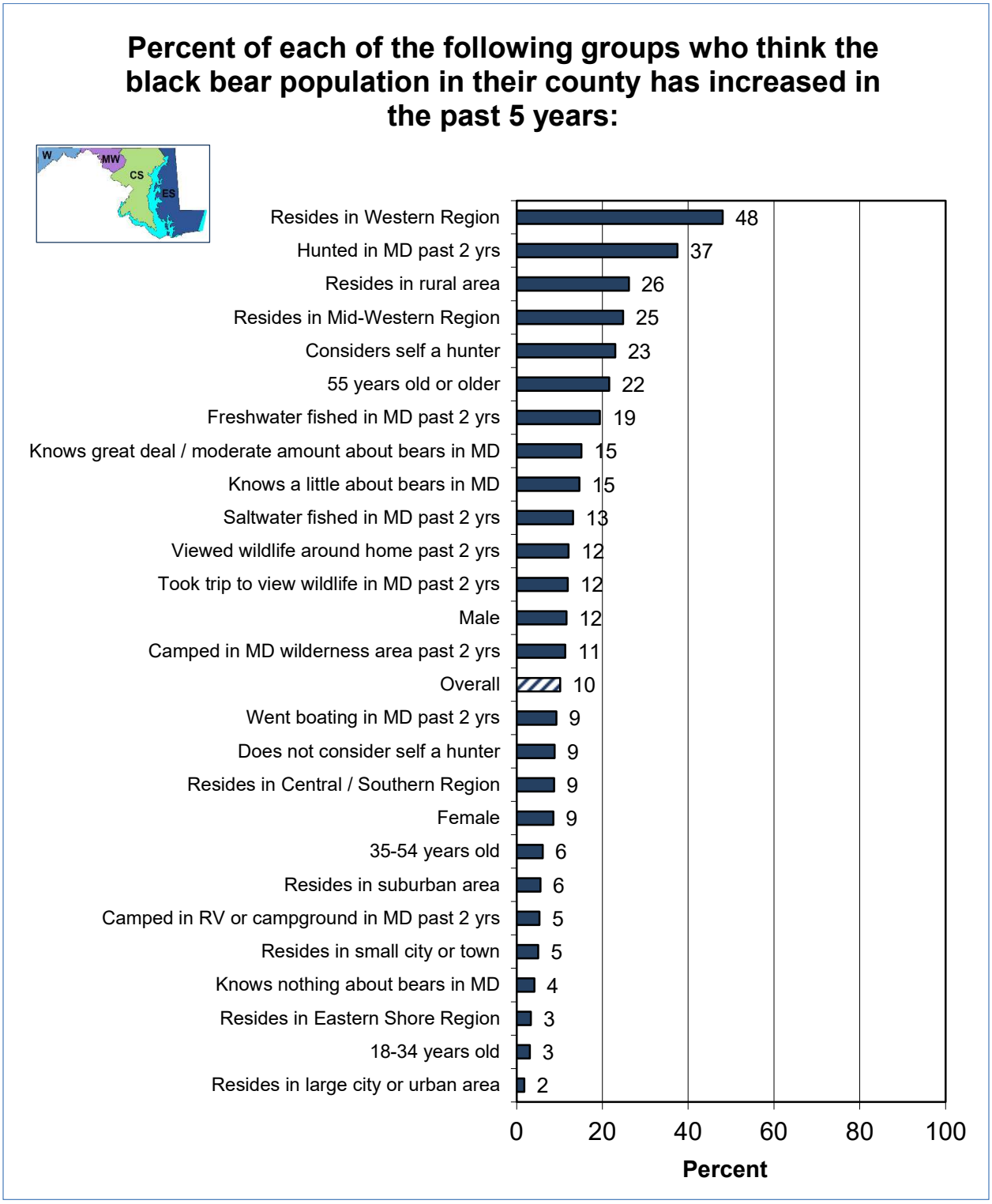

Overall, would you say the black bear population in your county is too high, too low, or about the right level?
2004
2013
2022
Percent
100
80
60
40
20
0
4
6
3
50
43
53
27
22
24
19
30
20
Too high
About the right level
Too low
Don't know

About half of residents (47%) said the black bear population in their county has *stayed about the same*, while twice as many thought it *decreased* (20%) than *increased* (10%). Meanwhile, 22% did not know.

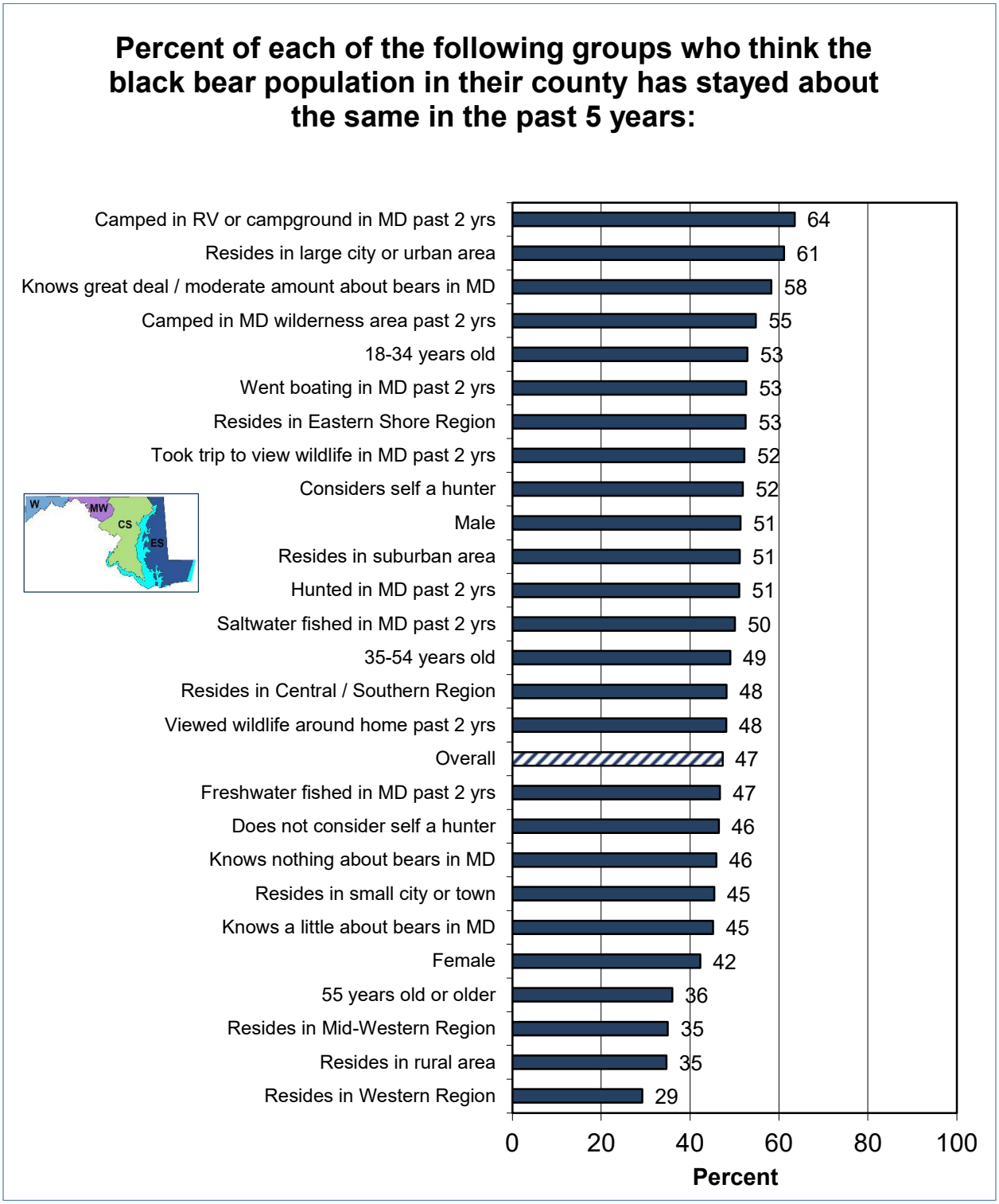




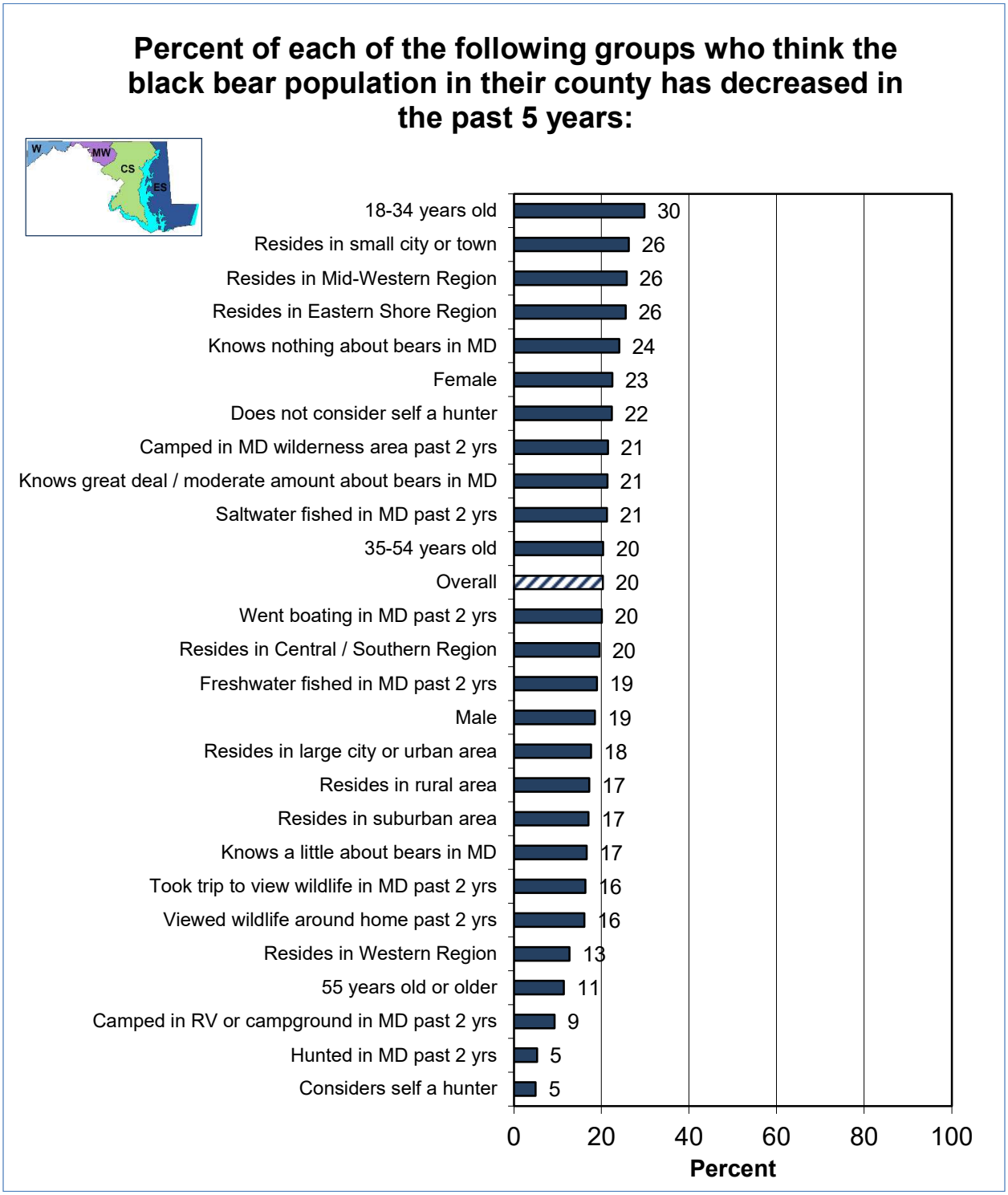
The groups most often saying that the bear population *increased* in their county are Western Region residents and those who hunted in the past 2 years.

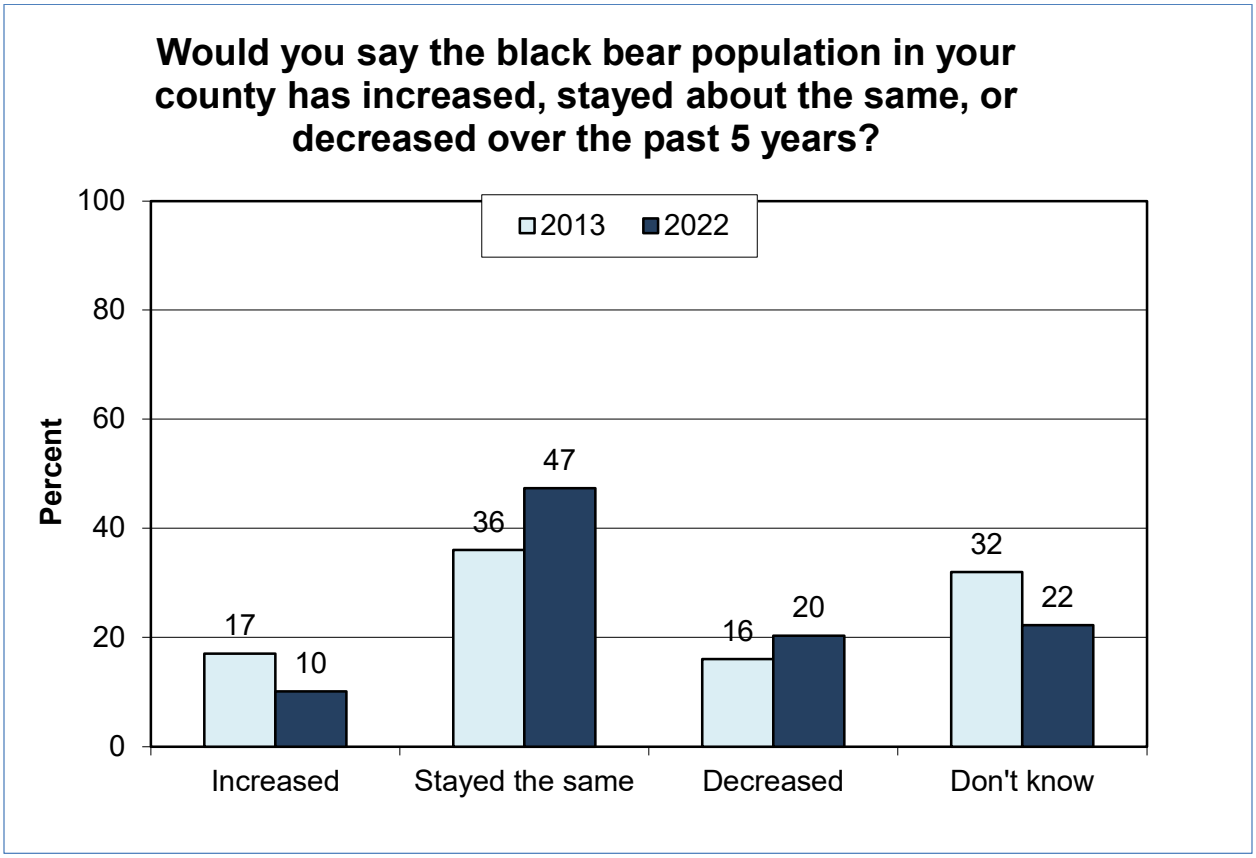


The groups most often saying that the bear population *stayed about the same* in their county are those who camped in the past 2 years, large city residents, and those who are knowledgeable about bears.



Younger residents, those from a small city or town, and Mid-Western and Eastern Shore Region residents are the groups most likely to think that the bear population has *decreased* in their county in the past 5 years.

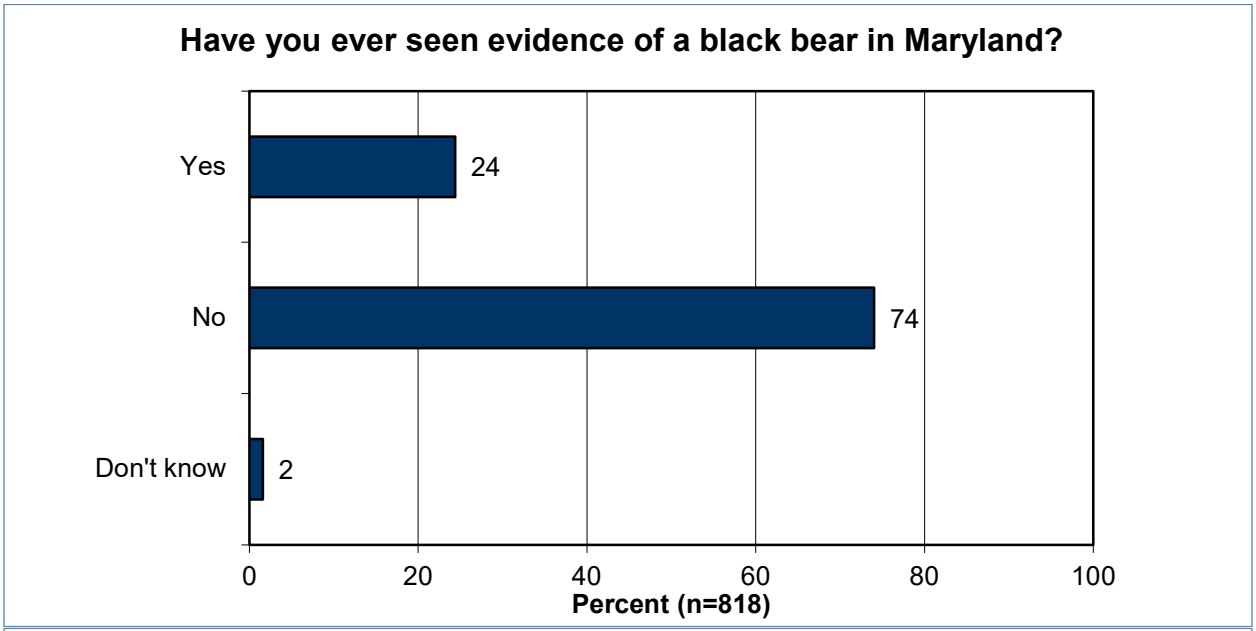


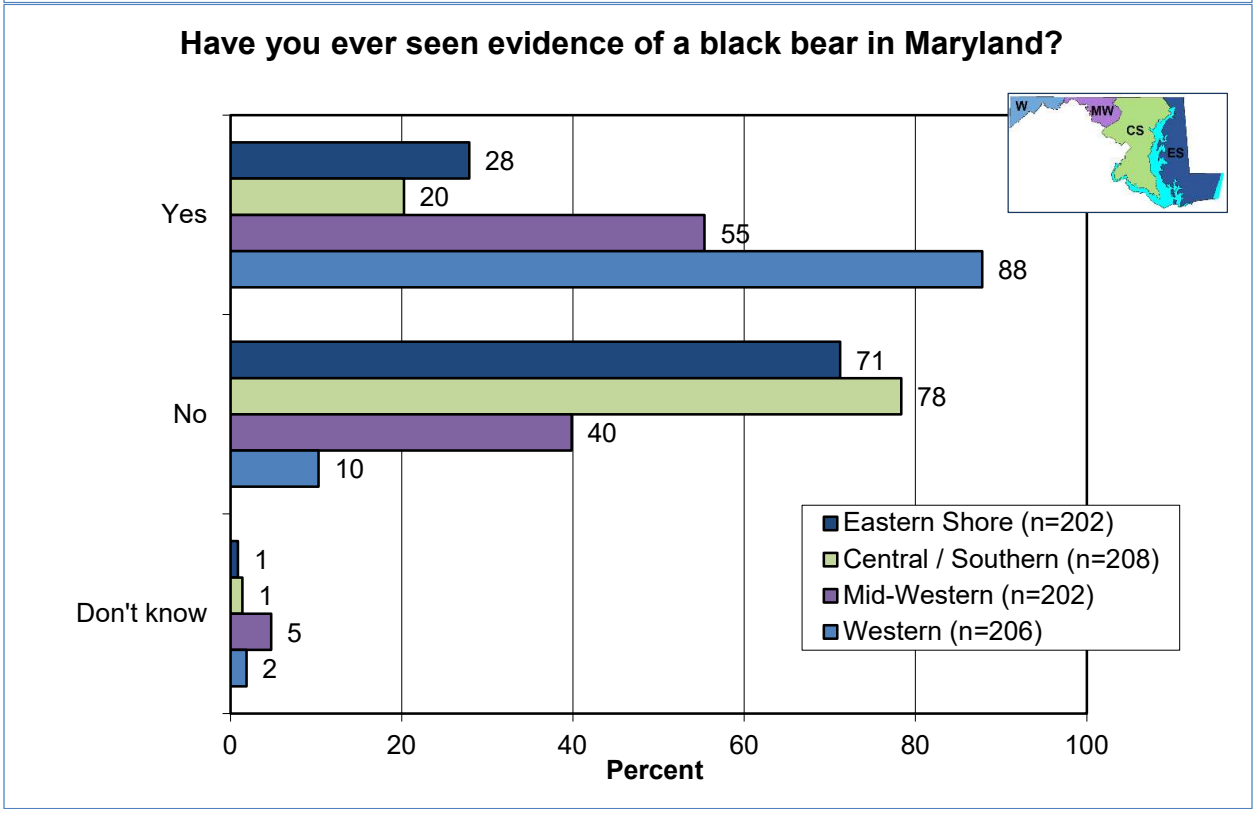


This question was not included in the 2004 survey.

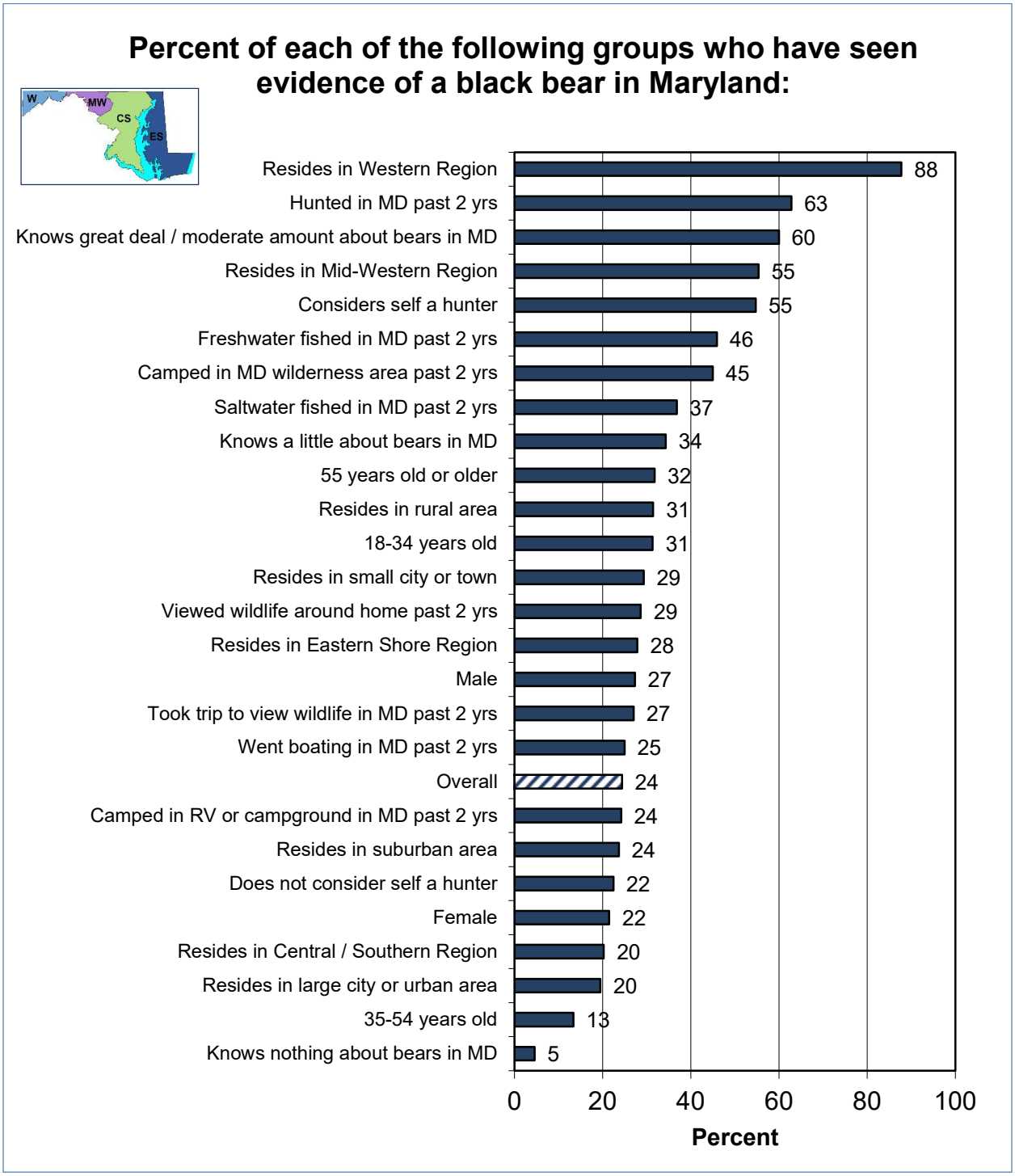
CONTACT WITH BLACK BEARS

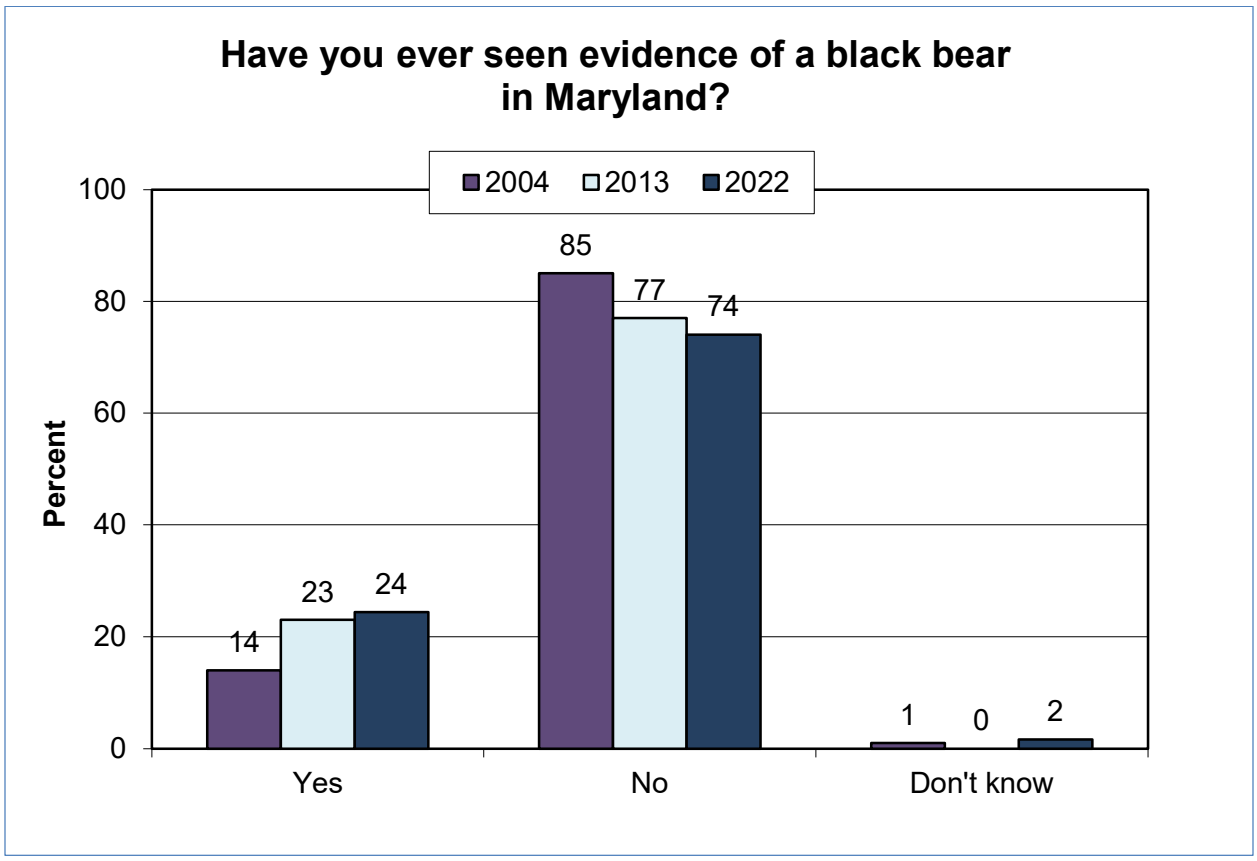
About a quarter of residents (24%) have seen evidence of a black bear in Maryland. Most residents from the Western Region (88%) and the Mid-Western Region (55%) have seen evidence.



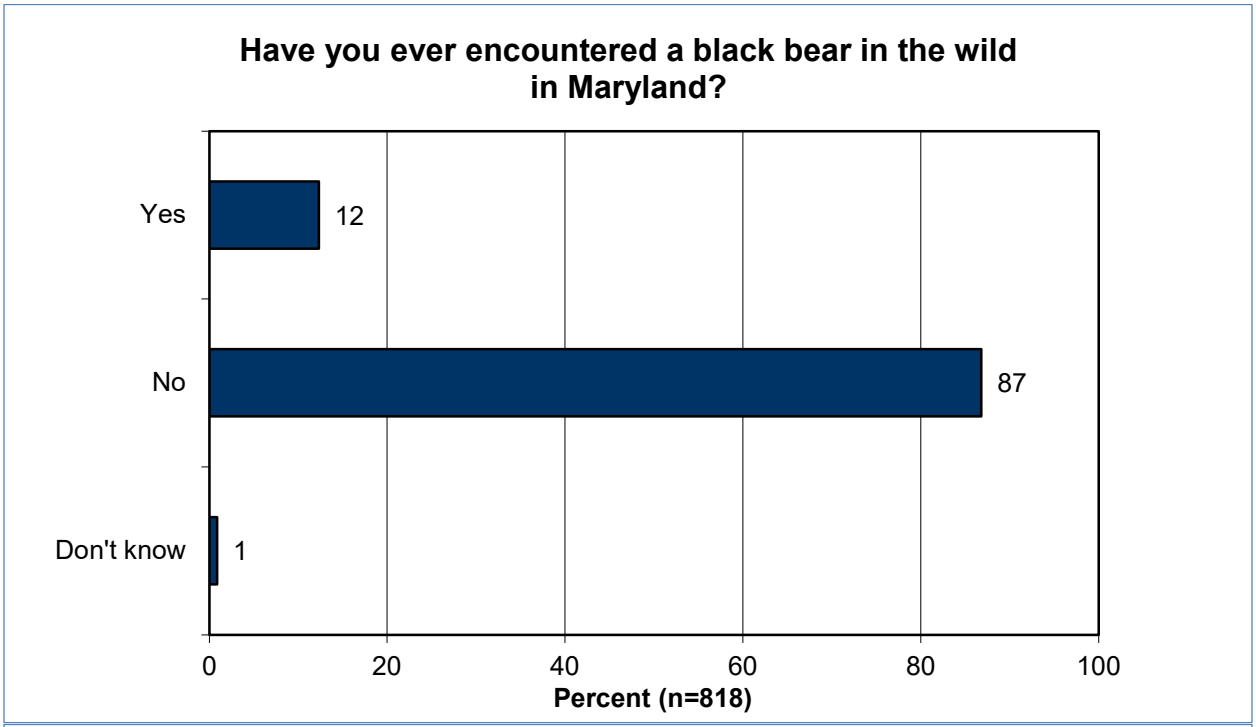


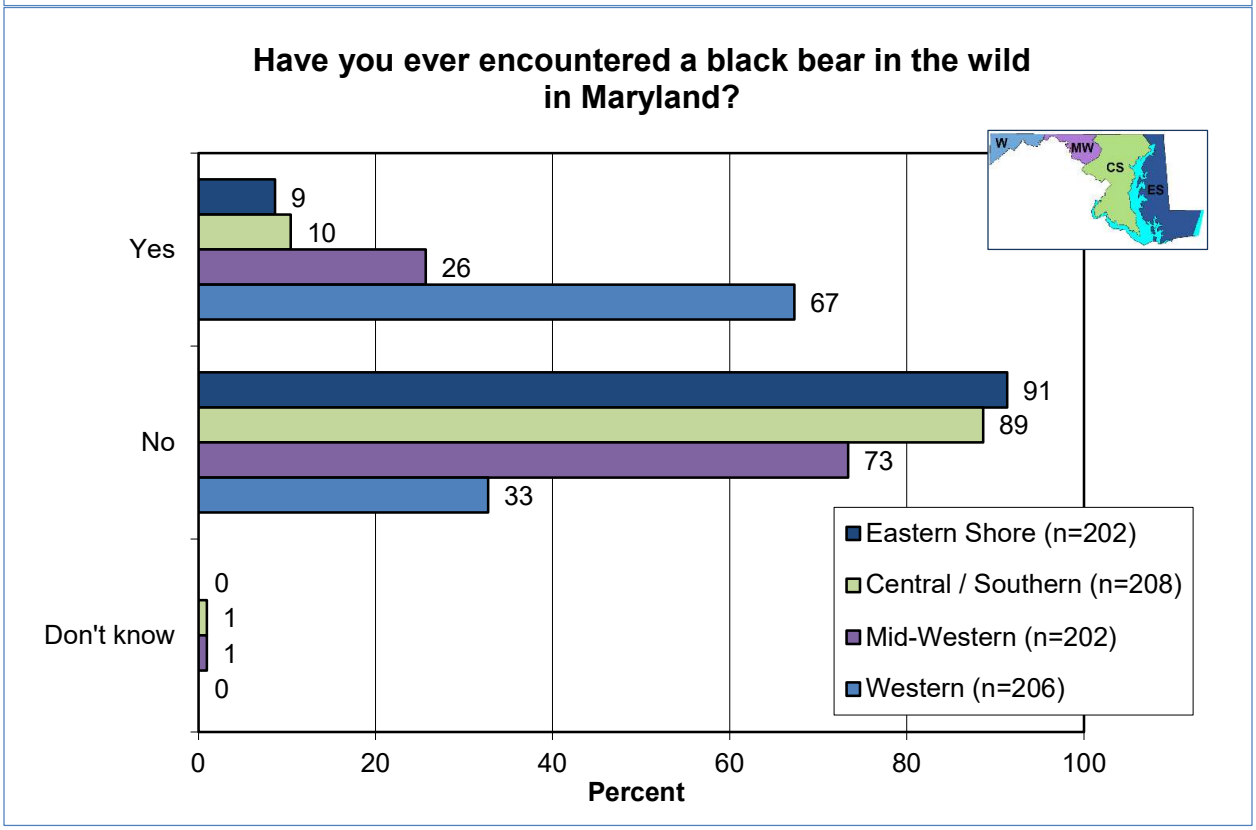
Along with Western Region residents, those who hunted and those knowledgeable about bears were the groups most likely to see evidence of a bear.



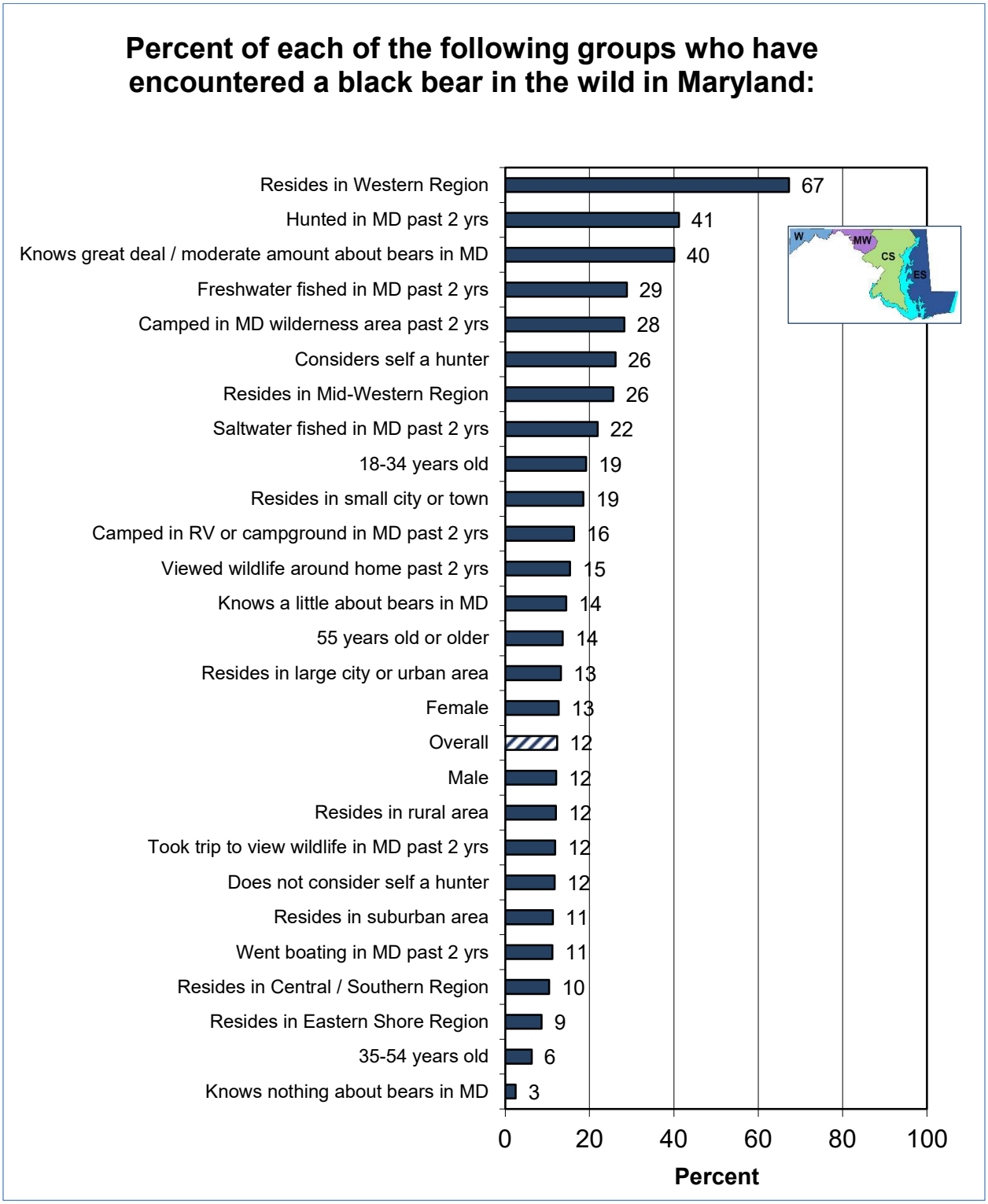

Have you ever seen evidence of a black bear in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
14
23
24
85
77
74
1
0
2
Yes
No
Don't know

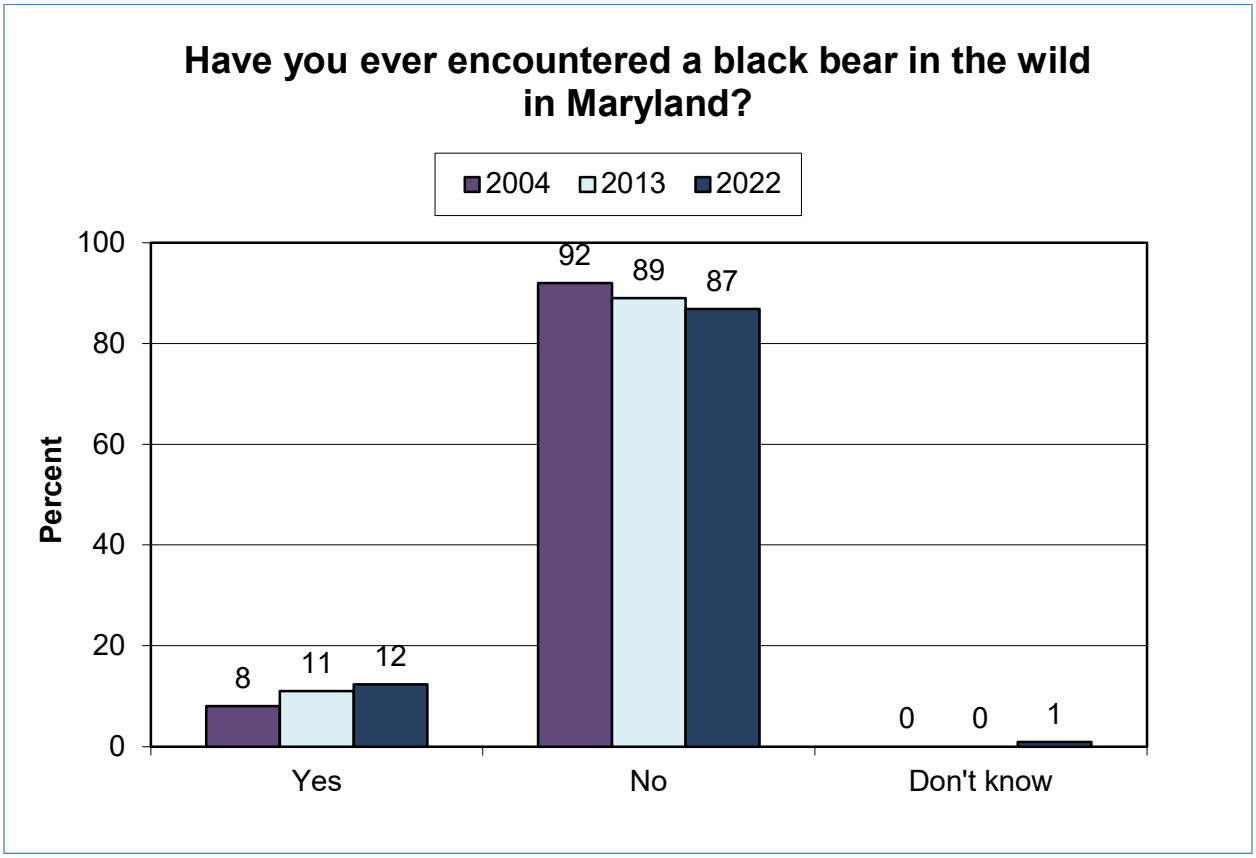
Overall, 12% of residents have encountered a black bear in the wild in Maryland. Two thirds of Western Region residents have encountered a bear. Note that Eastern Shore Region residents in all likelihood would not have encountered a bear at their home but instead while they were visiting other parts of Maryland.





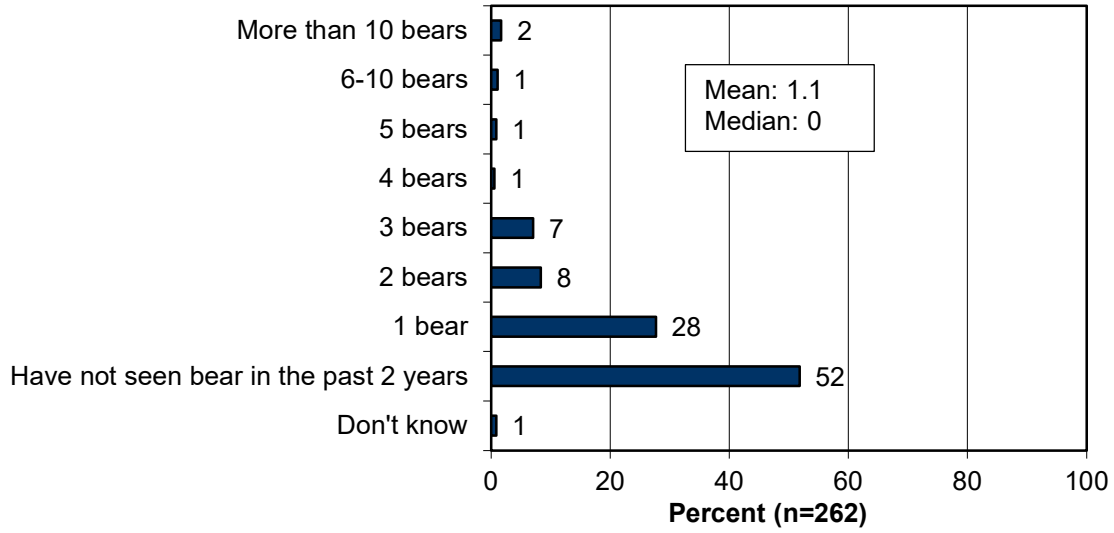
Along with Western Region residents, those who hunted and those knowledgeable about bears were the groups most likely to encounter a bear.



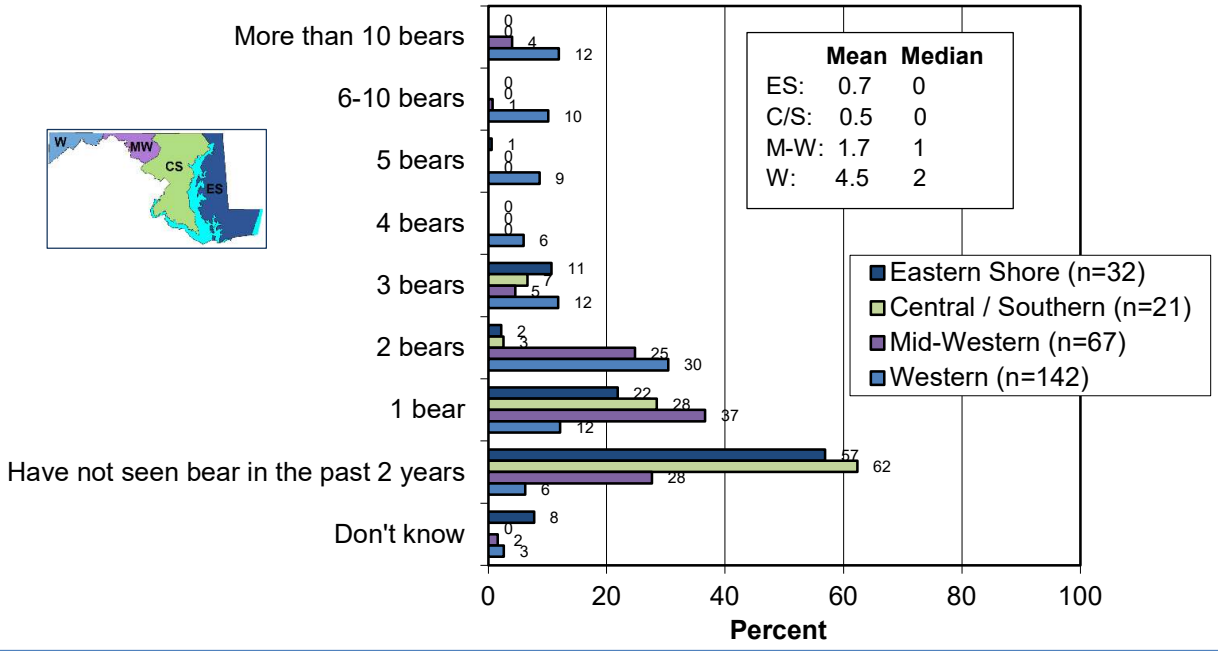

Have you ever encountered a black bear in the wild in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
8
11
12
92
89
87
0
0
1
Yes
No
Don't know

A slight majority of those who encountered a bear (52%) have not done so in the past 2 years; the mean over this timeframe is 1.1 encounter and the median is 0. In the Western Region, the mean was 4.5 and the median was 2, among those who ever encountered a bear in the wild.

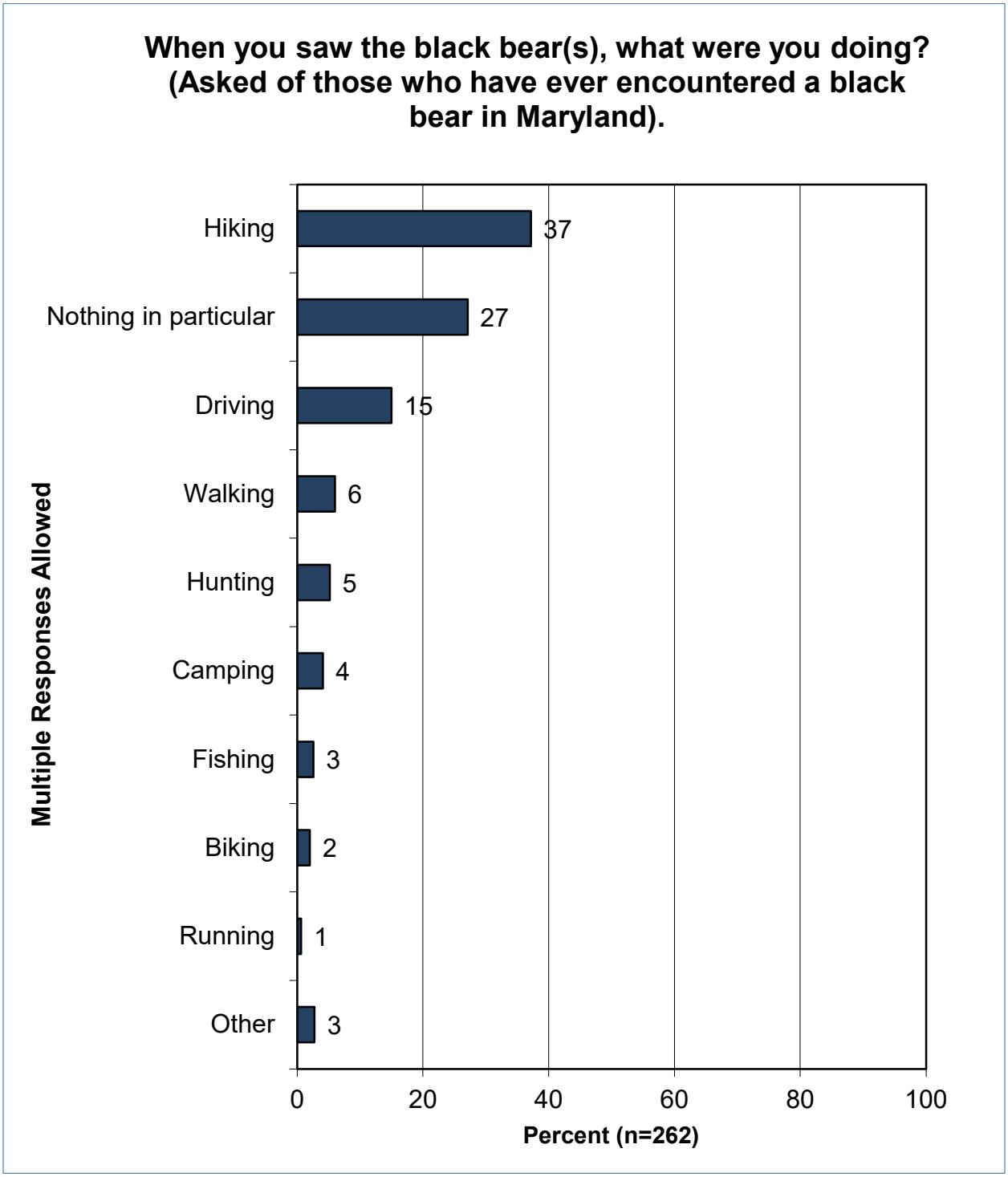
How many times have you encountered a black bear in the wild in Maryland in the past 2 years? (Asked of those who have ever encountered a black bear in Maryland).

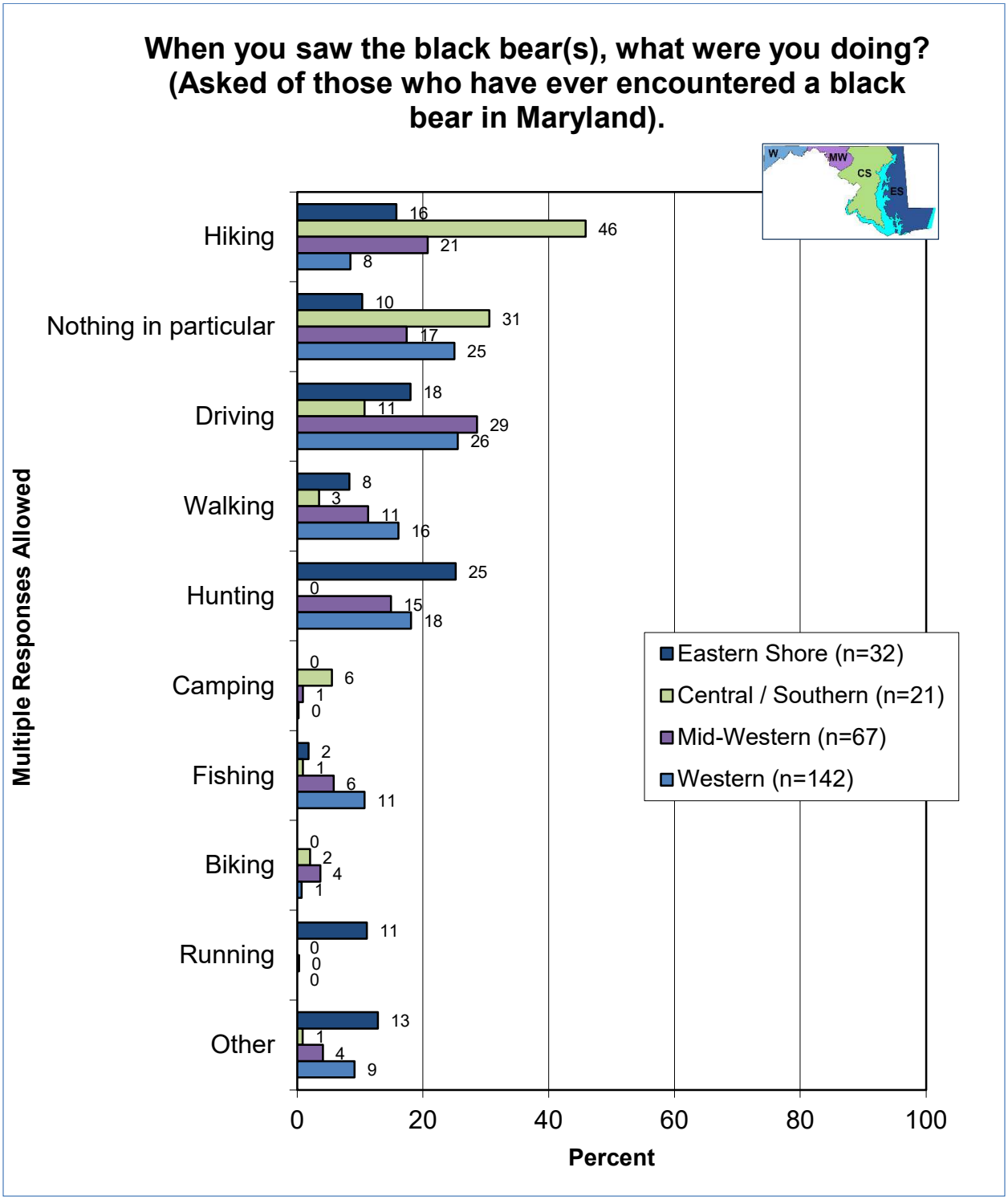


How many times have you encountered a black bear in the wild in Maryland in the past 2 years? (Asked of those who have ever encountered a black bear in Maryland).



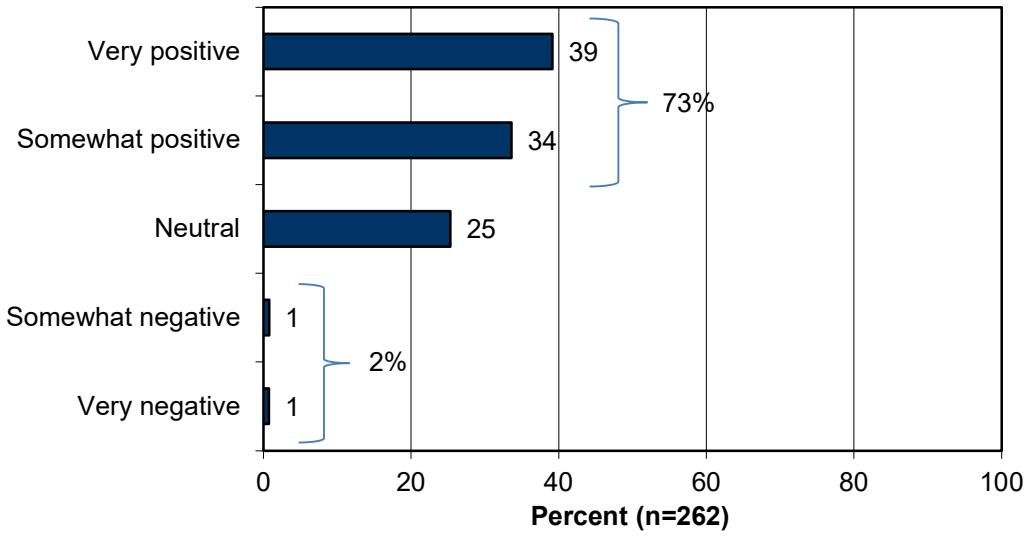
Those who encountered a black bear in Maryland were most often hiking, doing nothing in particular, or driving when they had the encounter.



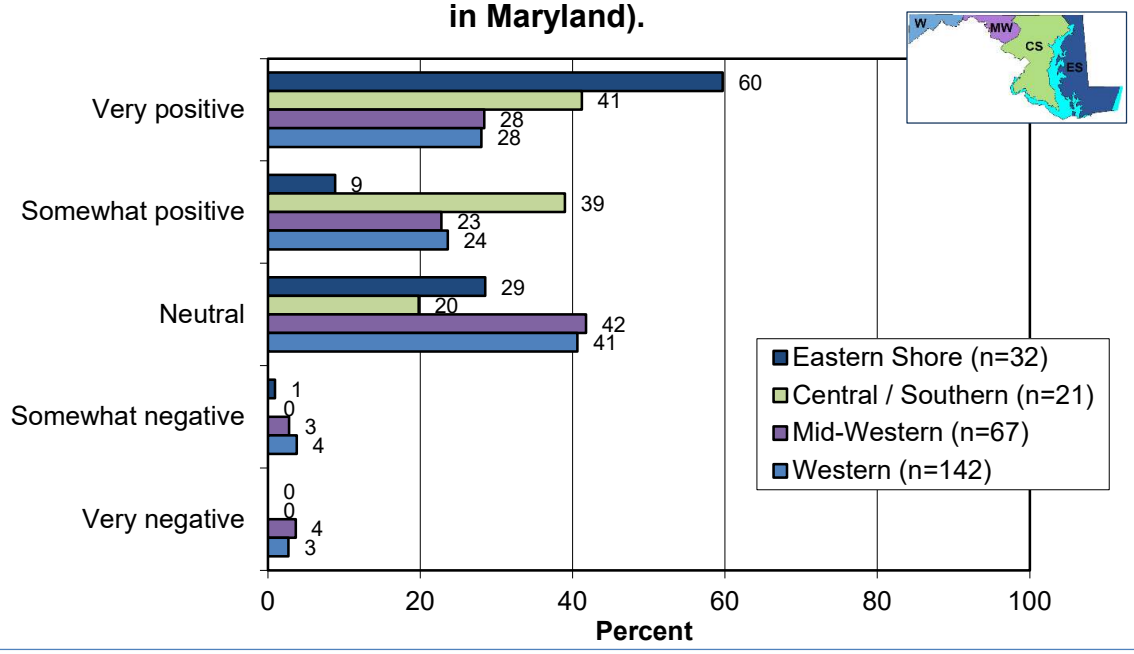

When you saw the black bear(s), what were you doing? (Asked of those who have ever encountered a black bear in Maryland).
W
MW
CS
ES
Multiple Responses Allowed
Hiking
16
46
21
8
Nothing in particular
10
31
17
25
Driving
18
11
29
26
Walking
8
3
11
16
Hunting
25
0
15
18
Camping
0
6
1
0
Fishing
2
1
6
11
Biking
0
2
4
1
Running
11
0
0
0
Other
13
1
4
9
Eastern Shore (n=32)
Central / Southern (n=21)
Mid-Western (n=67)
Western (n=142)
0
20
40
60
80
100
Percent

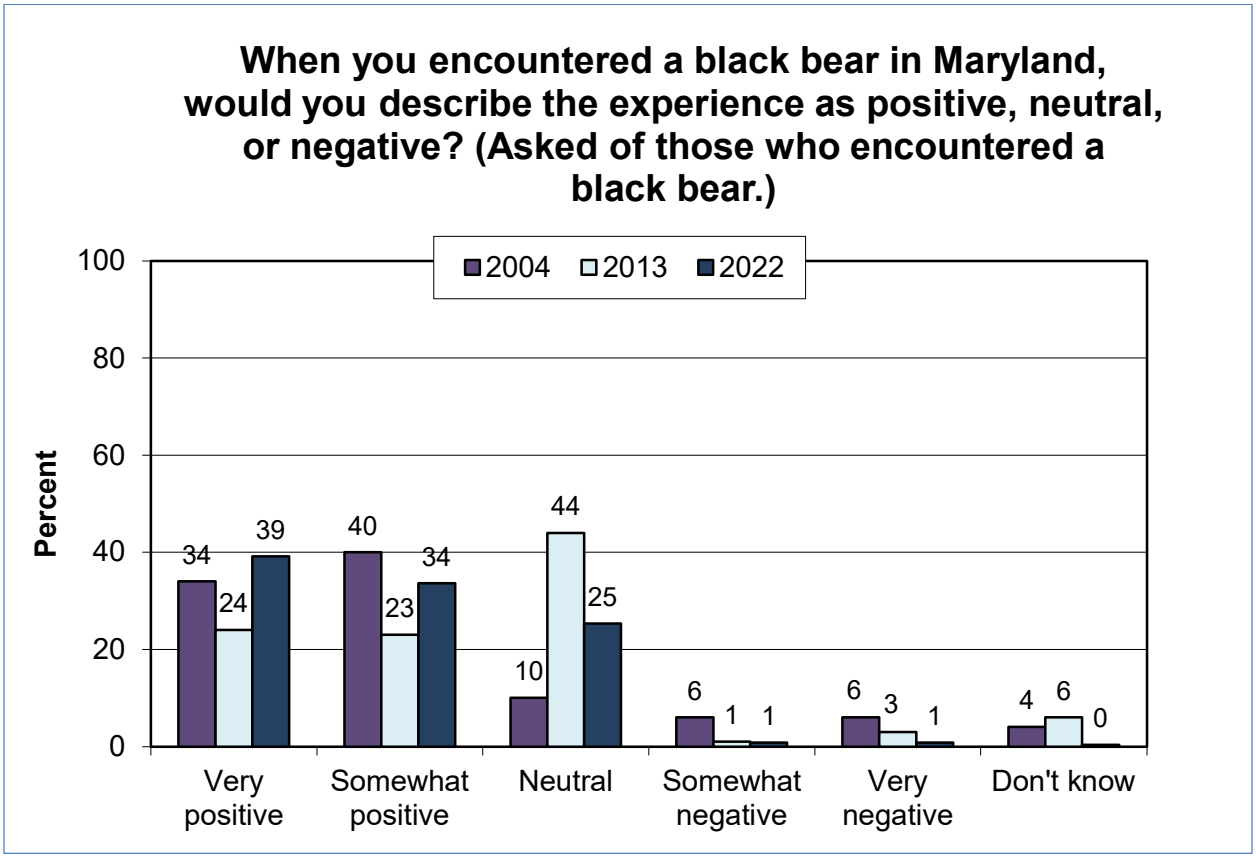
The majority of those who encountered a bear (73%) describe the experience as positive, while only 2% describe it as negative. The *very* positive percentage is highest in the Eastern Shore Region (60% stated this); note that these residents did not encounter them at home but most likely while they were recreating, which would affect their feelings about the encounter.

When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who have ever encountered a black bear in Maryland).

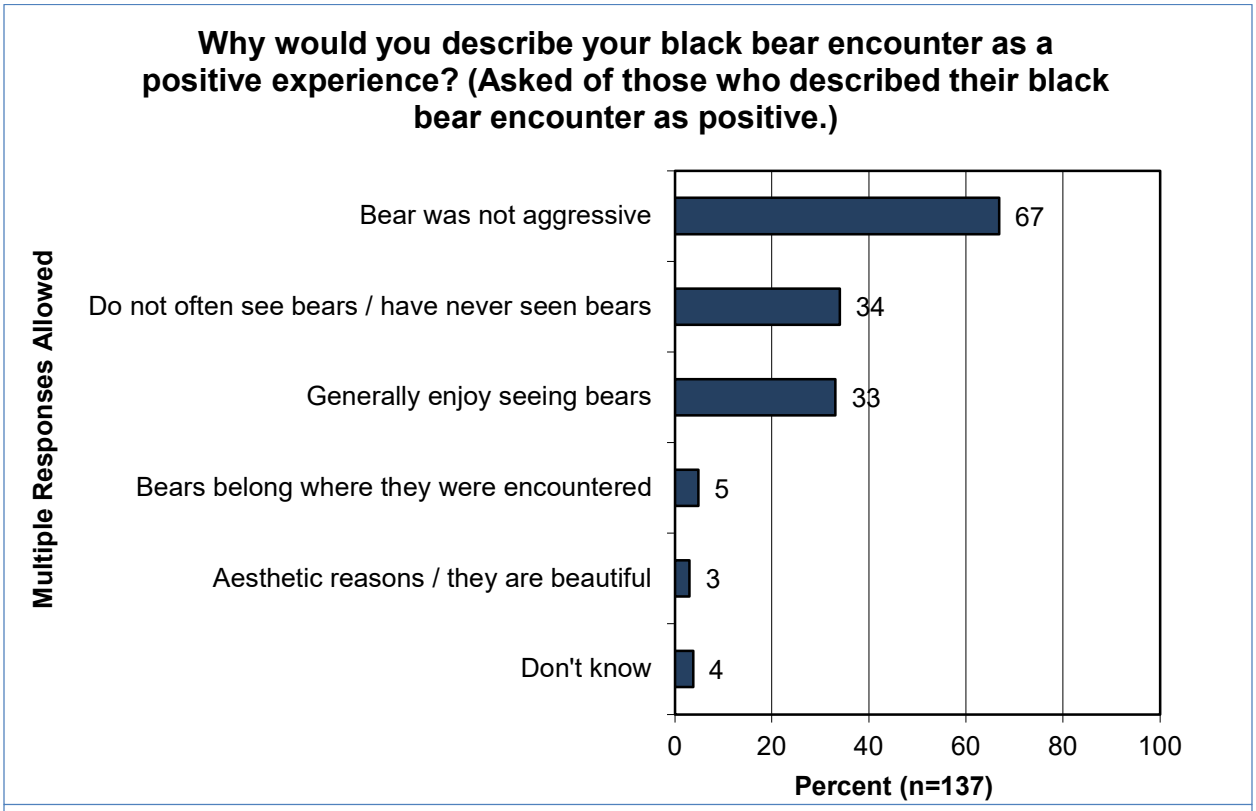


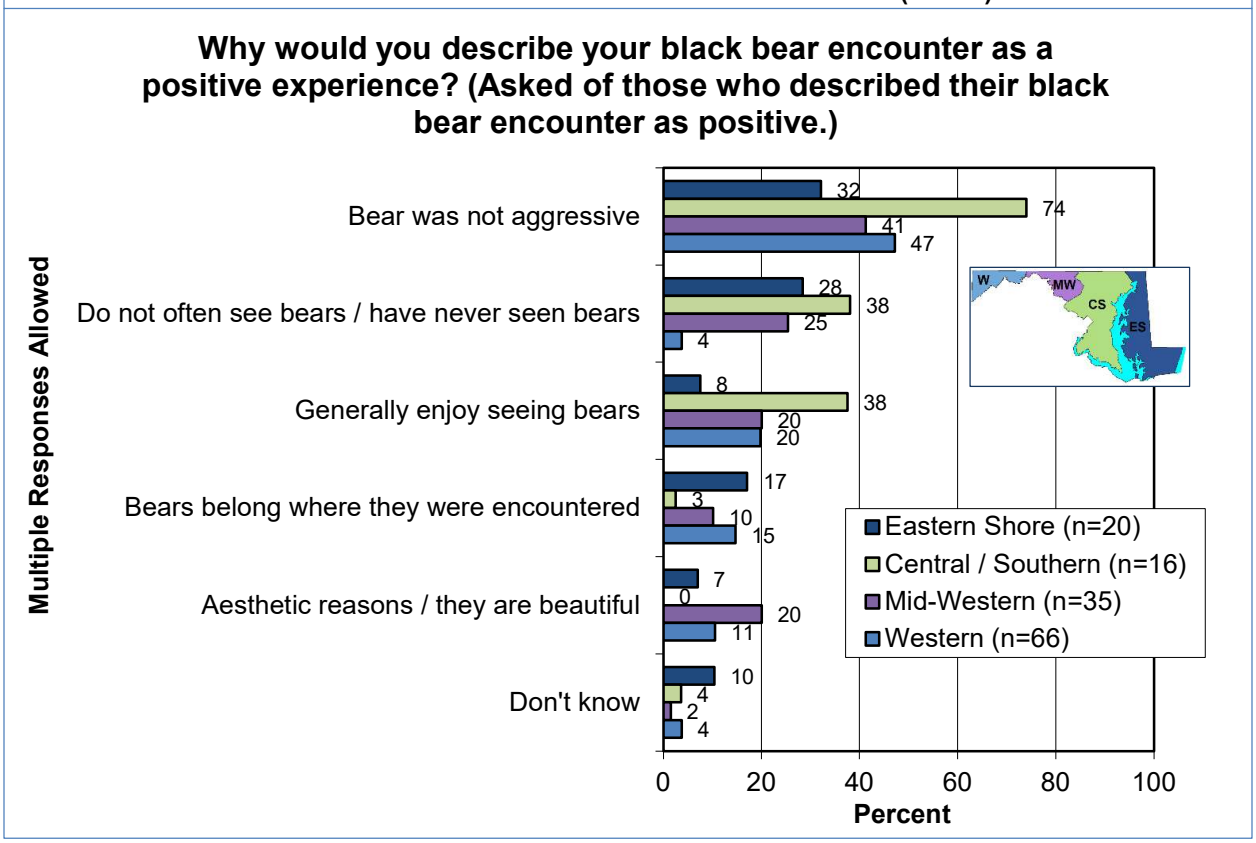
When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who have ever encountered a black bear in Maryland).



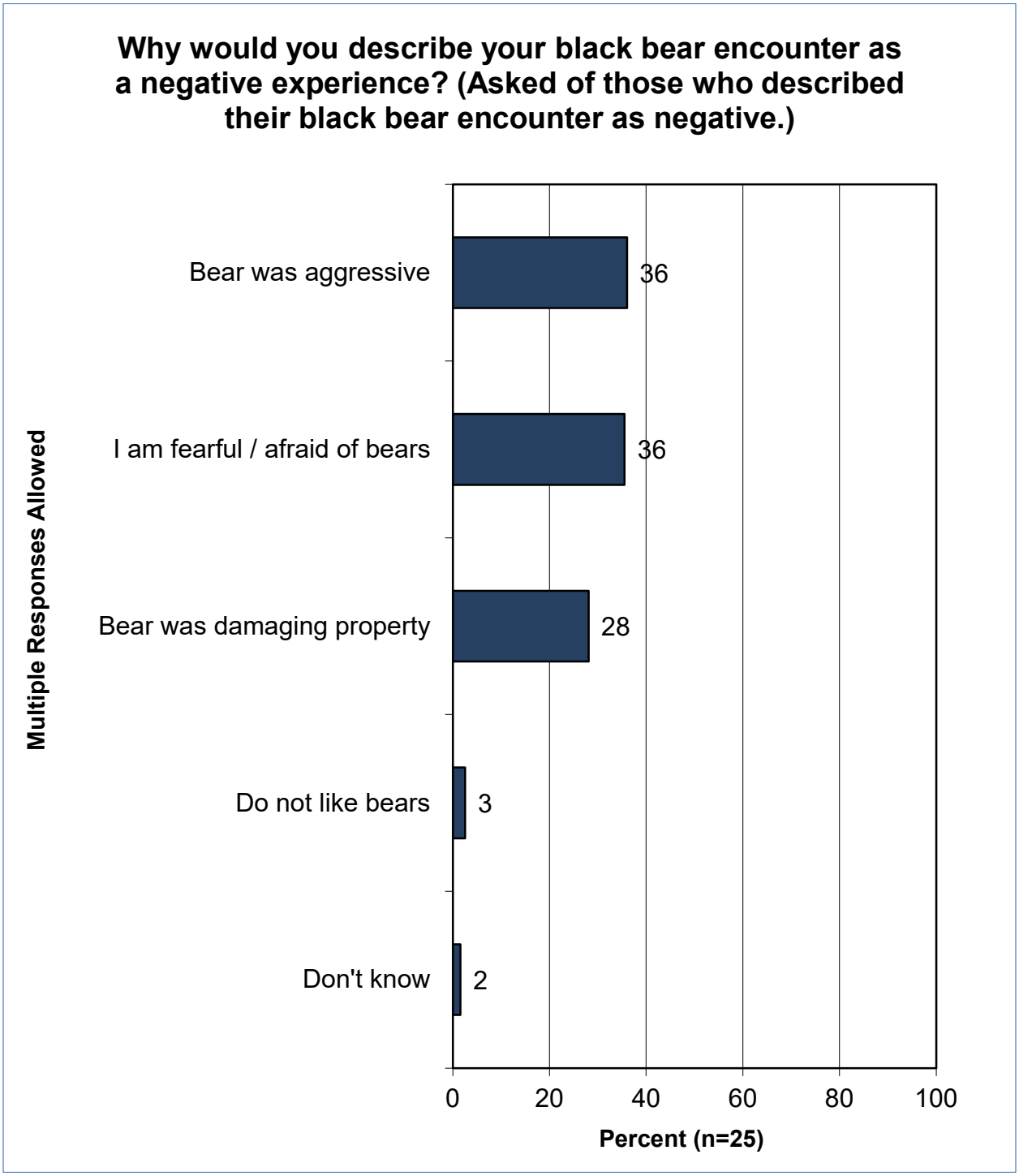

When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who encountered a black bear.)
2004
2013
2022
Percent
100
80
60
40
20
0
34
24
39
40
23
34
10
44
25
6
1
1
6
3
1
4
6
0
Very positive
Somewhat positive
Neutral
Somewhat negative
Very negative
Don't know

In follow-up, those who said the experience was positive most often said this because the bear was not aggressive, they rarely see or had never seen bears before, and that they generally enjoy seeing bears.





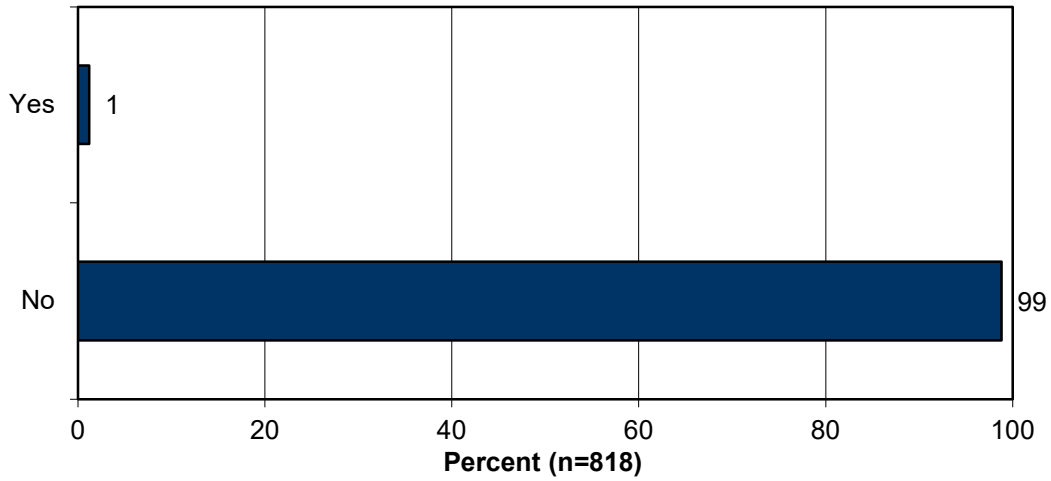
The reasons given most often by those who said the experience was negative are that the bear was aggressive, they are afraid of bears, and the bear was damaging property. (A regional graph is not included because of the low sample size, as so few people had a negative experience.)



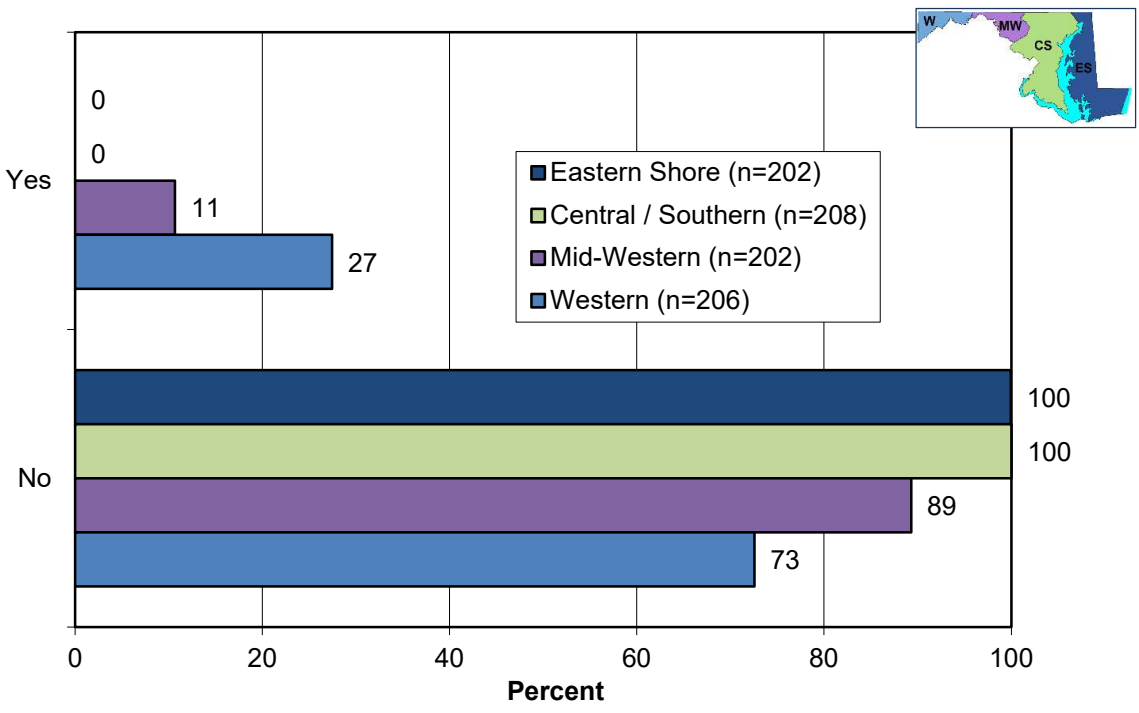
PROBLEMS WITH BLACK BEARS

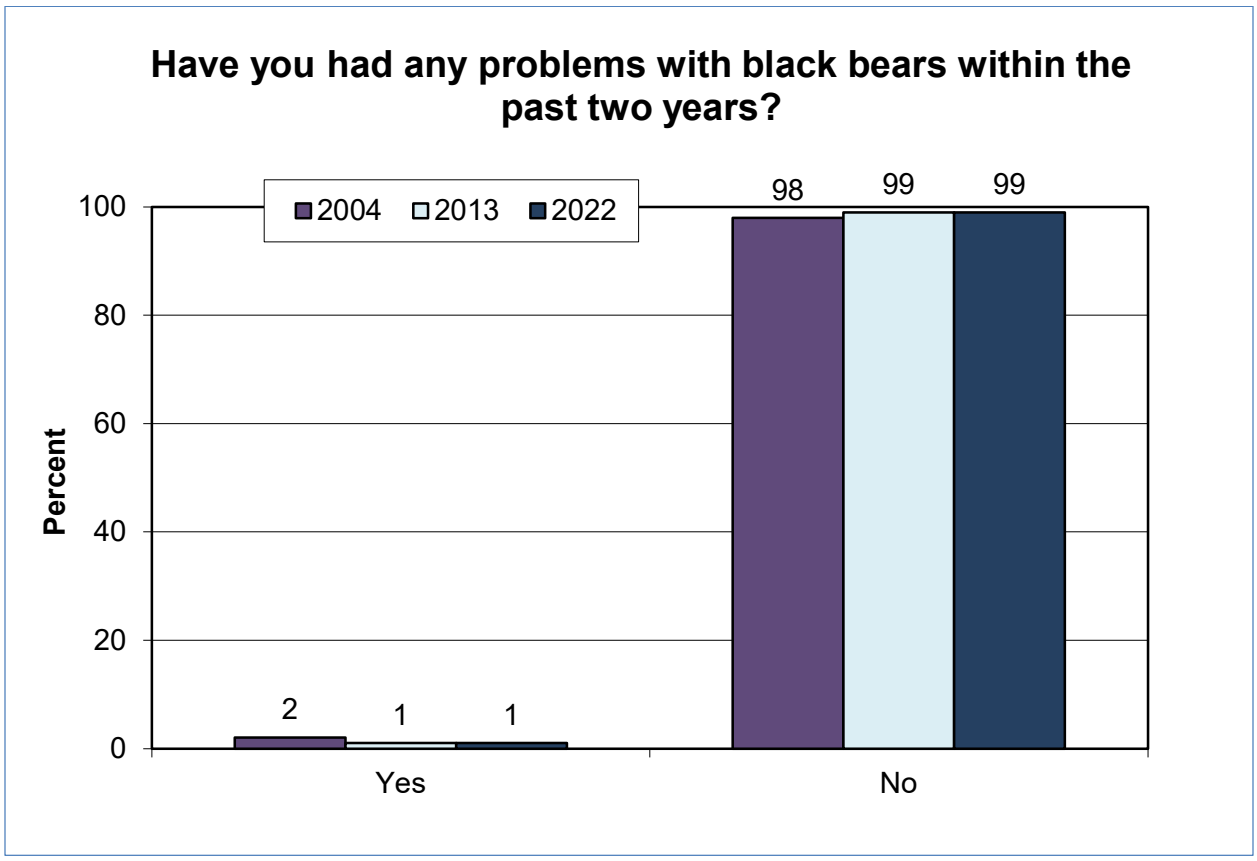
Only 1% of residents have had any problems with black bears in the past 2 years. The regional crosstabulation shows that bear problems were confined to the Western and Mid-Western Regions. (Because of this distribution and the low sample sizes, regional graphs are not included for the follow-up questions in this section.)

Sometimes people have problems with wildlife in their neighborhoods or around their homes. Have you had any problems with black bears within the past 2 years?

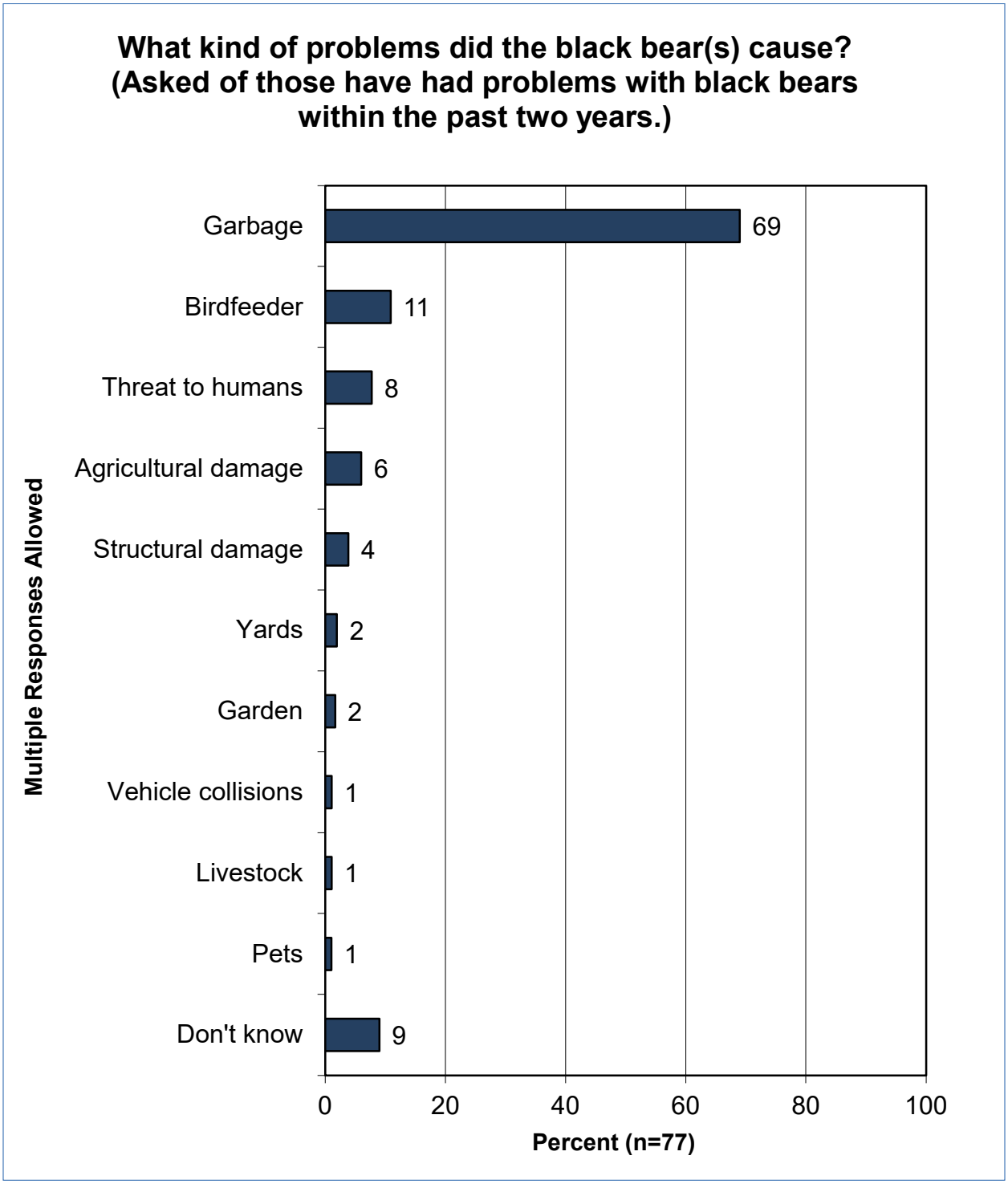


Sometimes people have problems with wildlife in their neighborhoods or around their homes. Have you had any problems with black bears within the past 2 years?




Have you had any problems with black bears within the past two years?
2004
2013
2022
Percent
100
80
60
40
20
0
2
1
1
98
99
99
Yes
No

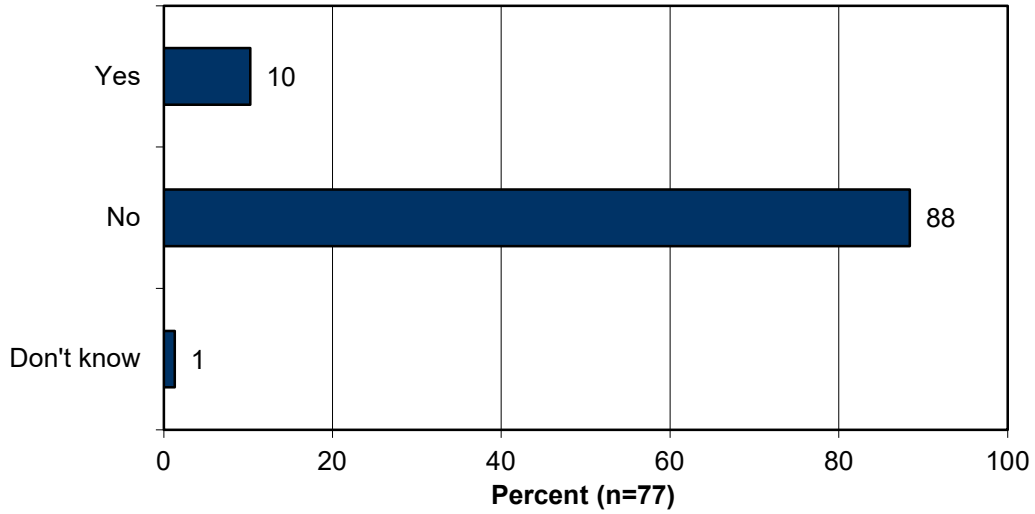
By far, residents who had problems with bears most often said that the bears got into their garbage (69% of the group stated this).



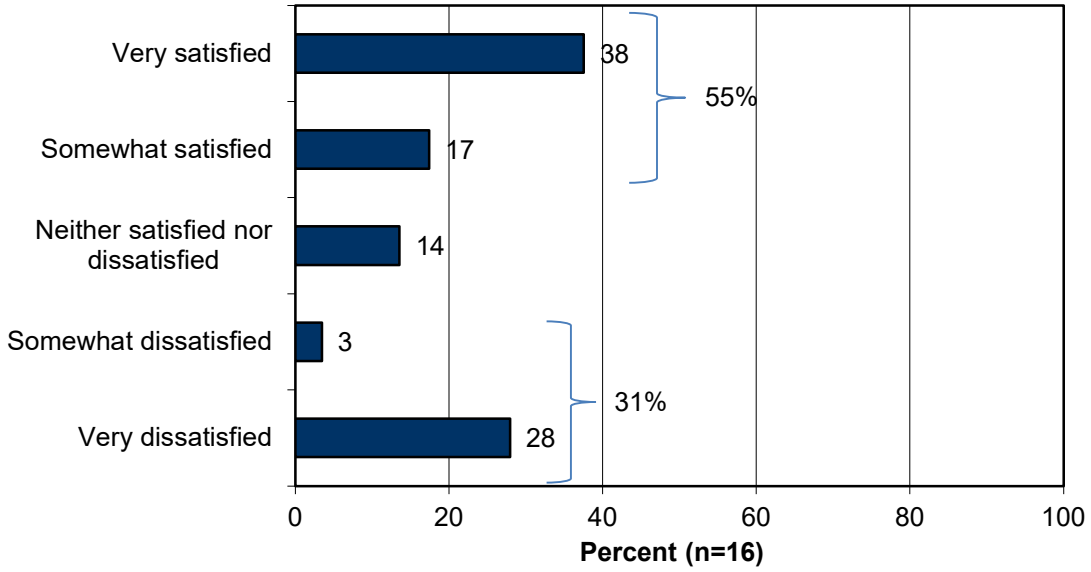
Among those who had problems with bears, 10% contacted someone for assistance (in the follow-up question, everyone said that they contacted the DNR, so a graph is not shown of this).

In another follow-up question, 55% were satisfied with the service they received from the DNR, but 31% were dissatisfied. Among those who were dissatisfied, the open-ended reasons were that they felt that the DNR did not do anything or take care of the problem (graph not shown).

Did you contact anyone as a result of the problem with black bear(s)? (Asked of those have had problems with black bears within the past two years.)

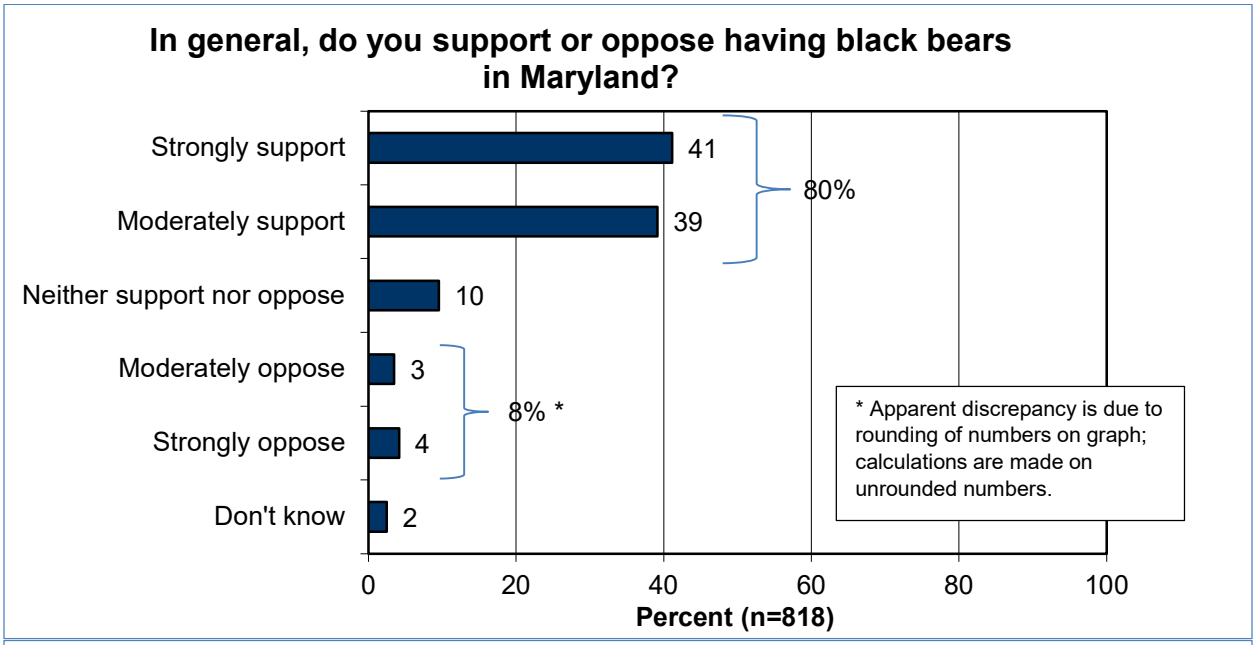


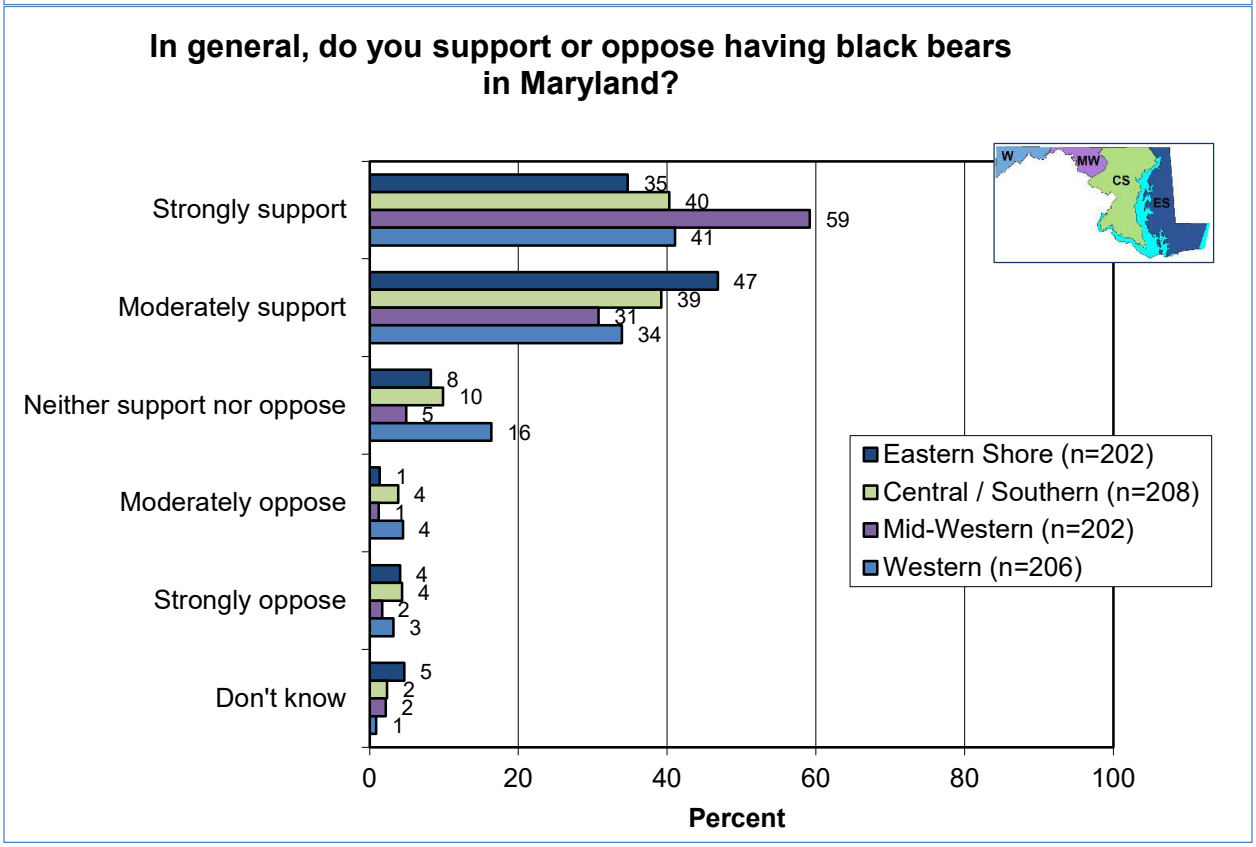
Overall, how satisfied or dissatisfied were you with the service you received from the agency you contacted regarding the problem with black bear(s)? (Asked of those who contacted an agency as result of a problem with black bears.)



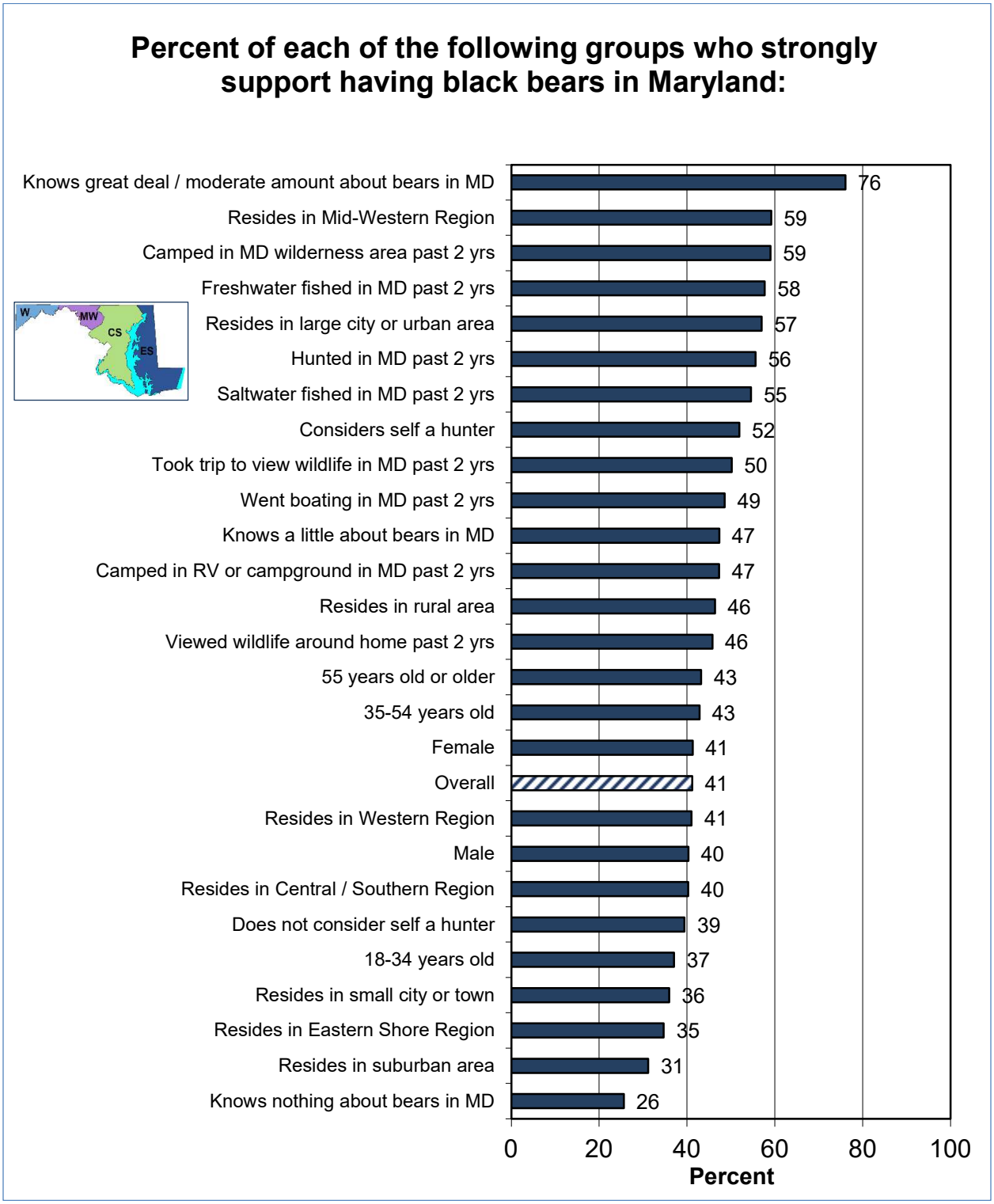
ATTITUDES TOWARD BLACK BEARS AND BLACK BEAR MANAGEMENT

Four fifths of residents (80%) *strongly* or *moderately* support having black bears in Maryland, compared to only 8% who oppose.

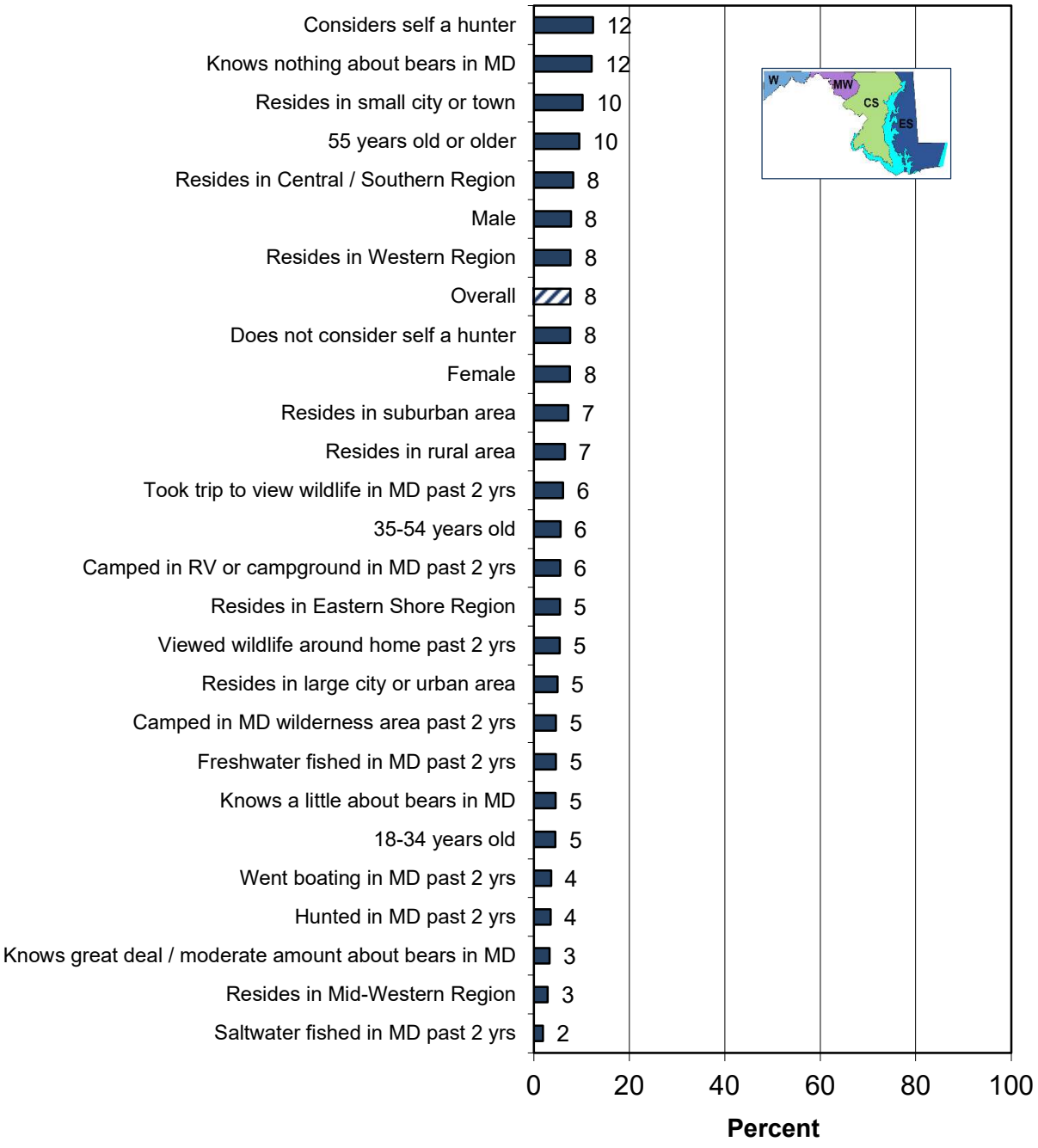




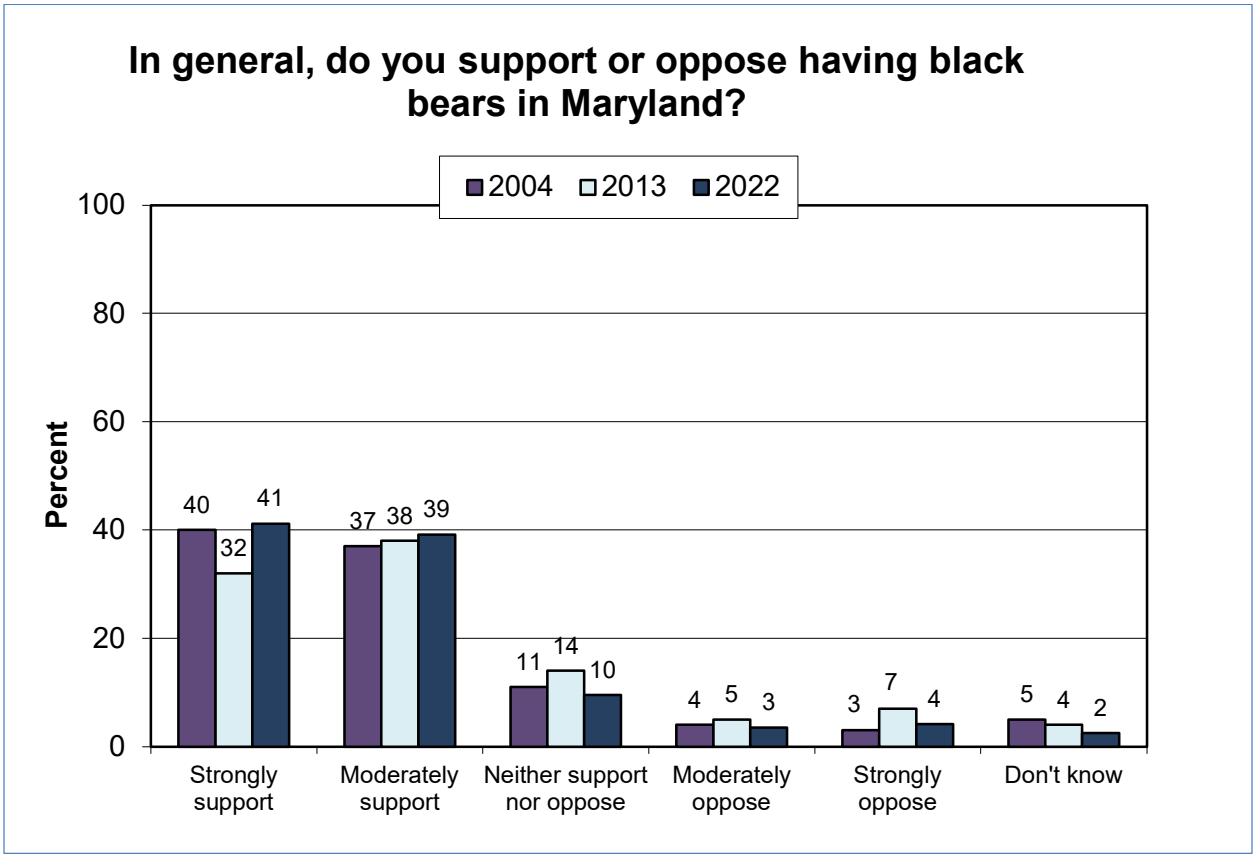
Those who indicated high knowledge levels about black bears also had the most strong support for their presence in Maryland.



Percent of each of the following groups who strongly or moderately oppose having black bears in Maryland:

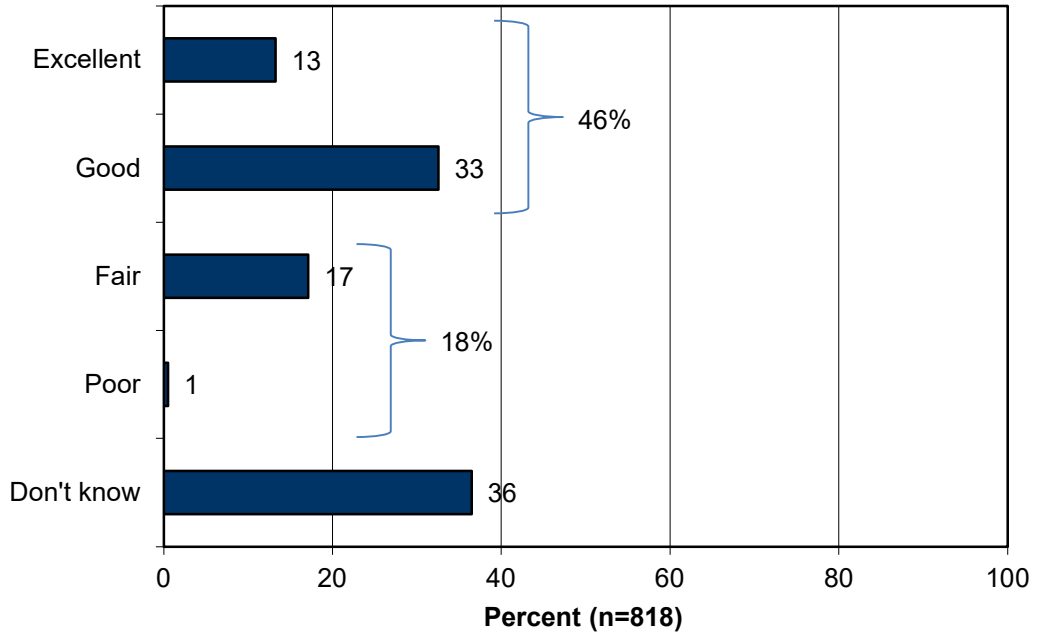


There is a marked increase in support since the 2013 survey.

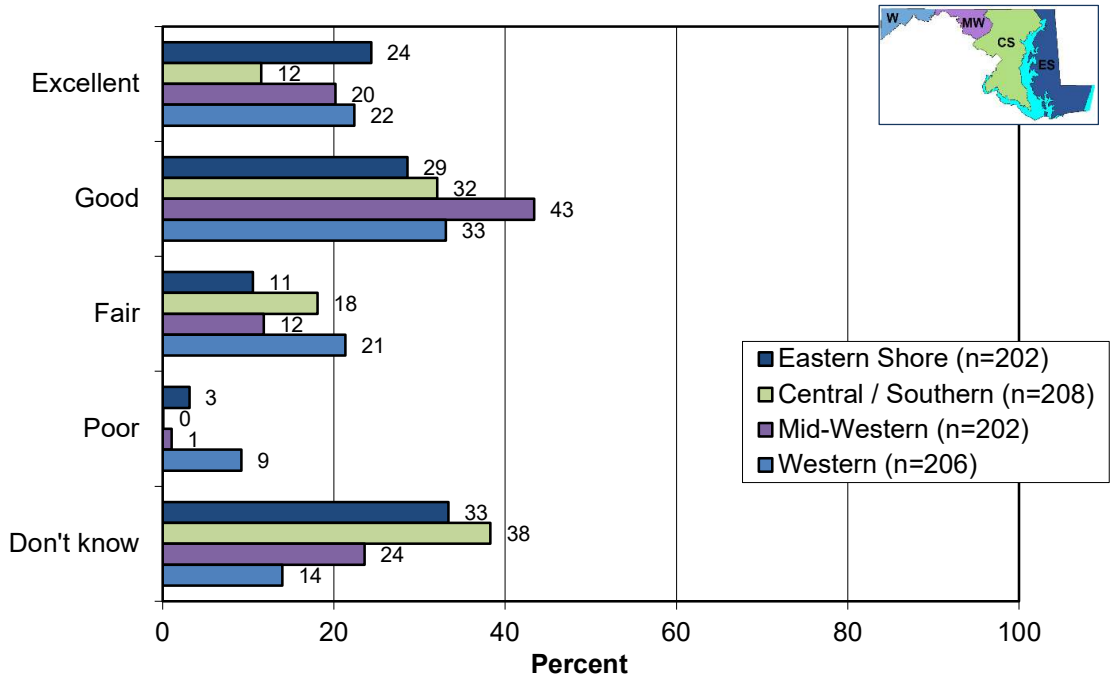


Nearly half of residents (46%) rated the DNR's management of black bears in the top half of the scale: 13% rated it *excellent* and 33% rated it *good*. At the other end of the scale, 17% rated the management as *good* and 1% rated it *poor*. Over a third (36%) did not know.

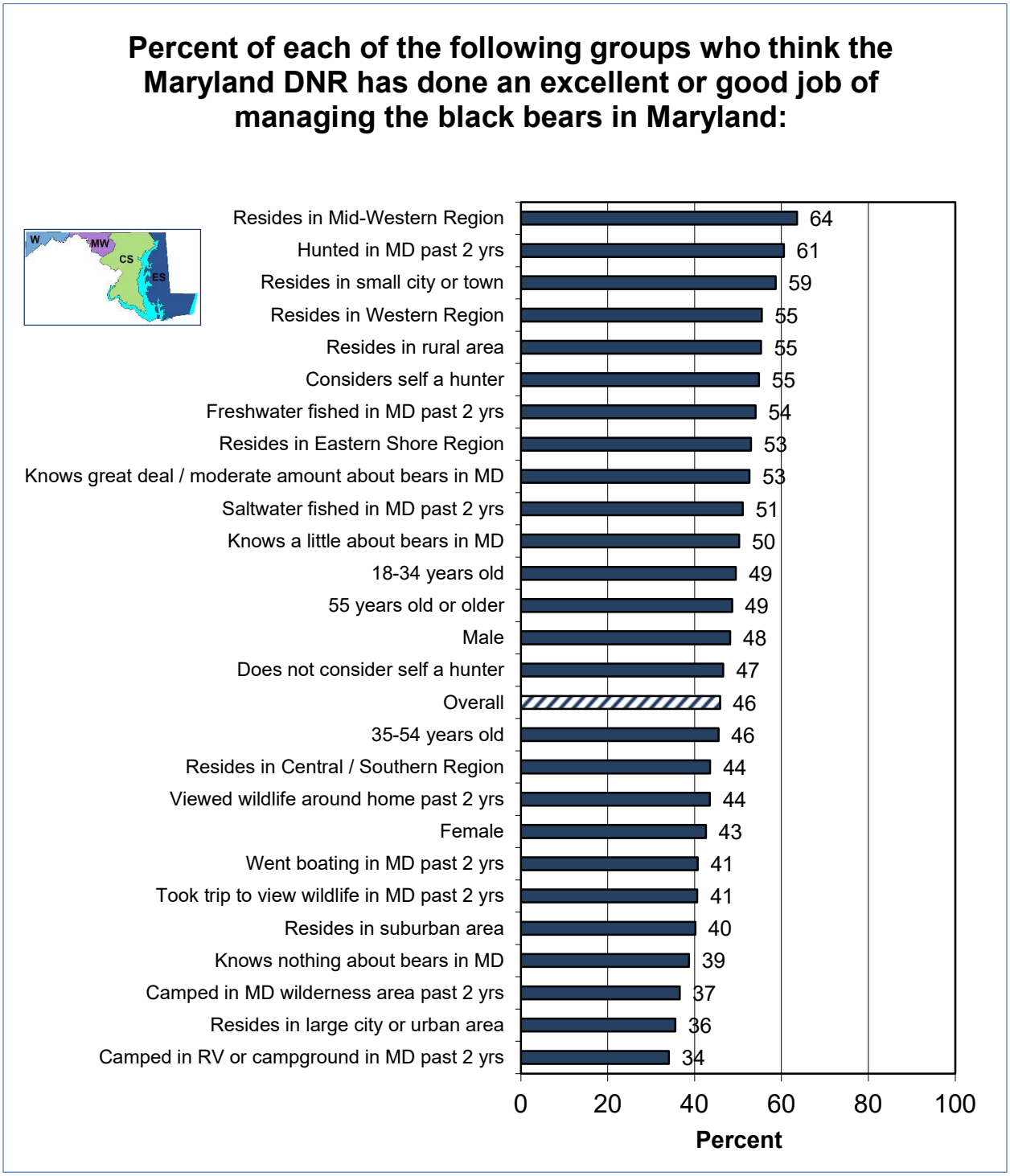
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?



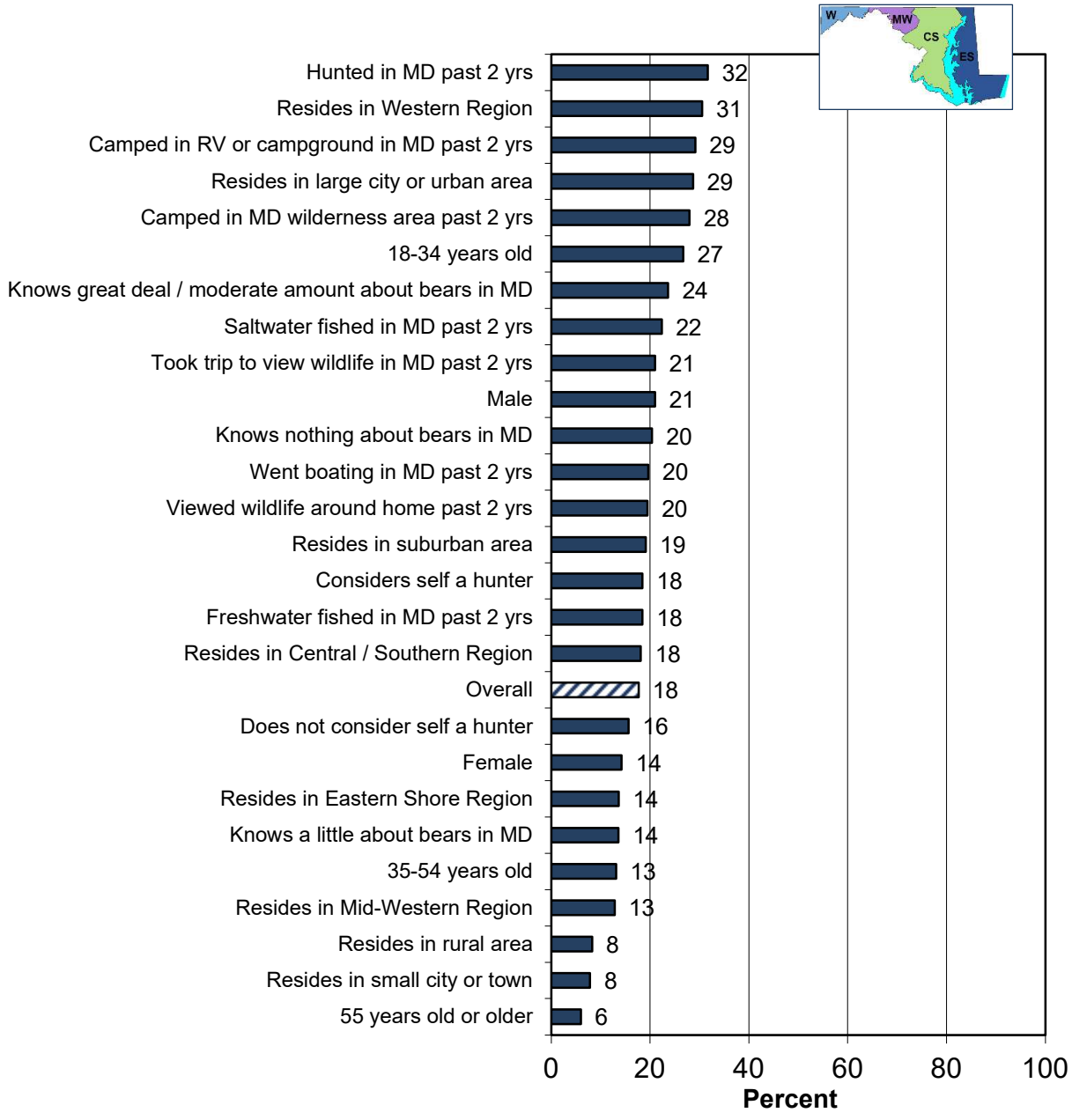
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?

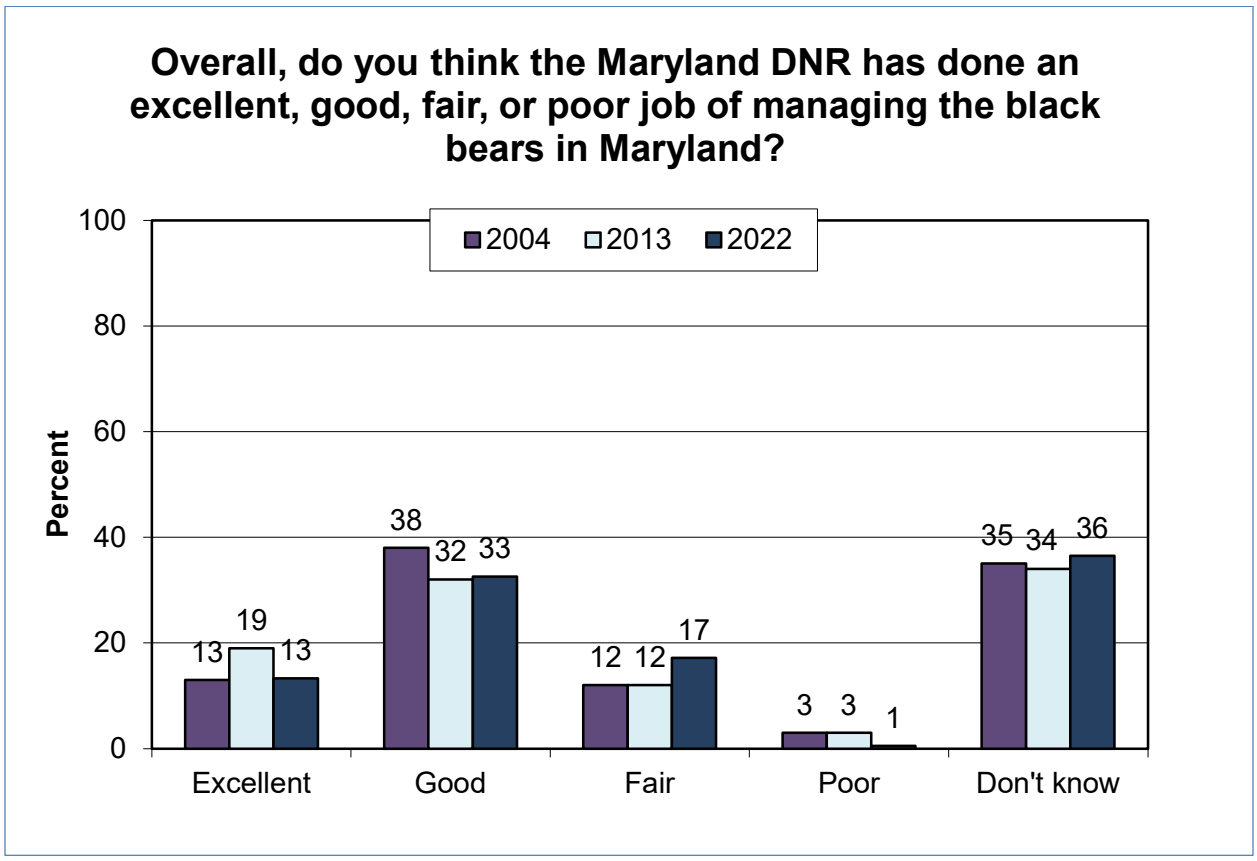


The groups most often rating the DNR's bear management as *excellent* or *good* are Mid-Western Region residents, those who hunted in the past 2 years, and those from a small city or town.



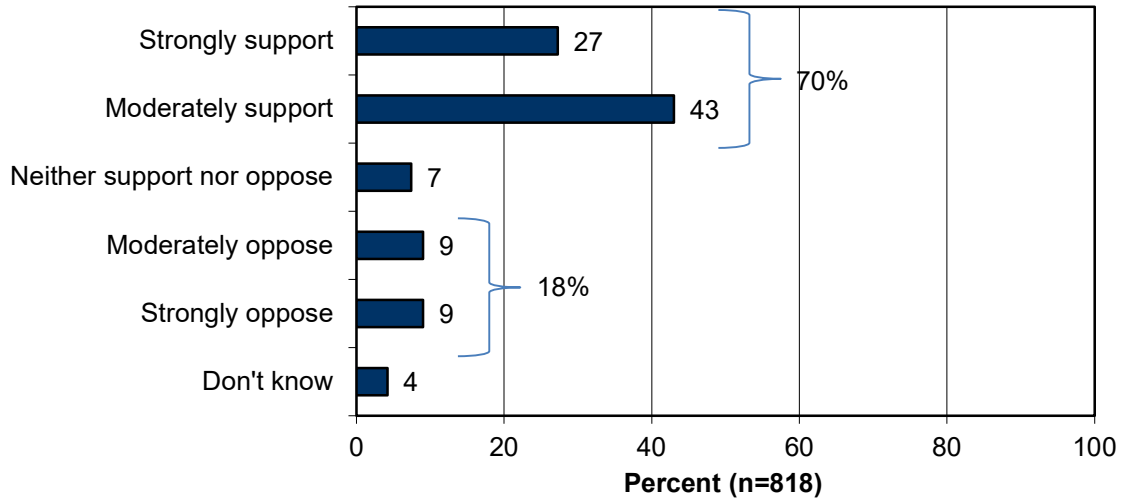
Percent of each of the following groups who think the Maryland DNR has done a fair or poor job of managing the black bears in Maryland:




Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
13
19
13
38
32
33
12
12
17
3
3
1
35
34
36
Excellent
Good
Fair
Poor
Don't know

A majority of residents (70%) support allowing the black bear population to naturally expand into other parts of Maryland from their current location in the westernmost counties. In contrast, 18% oppose an expansion.

For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?



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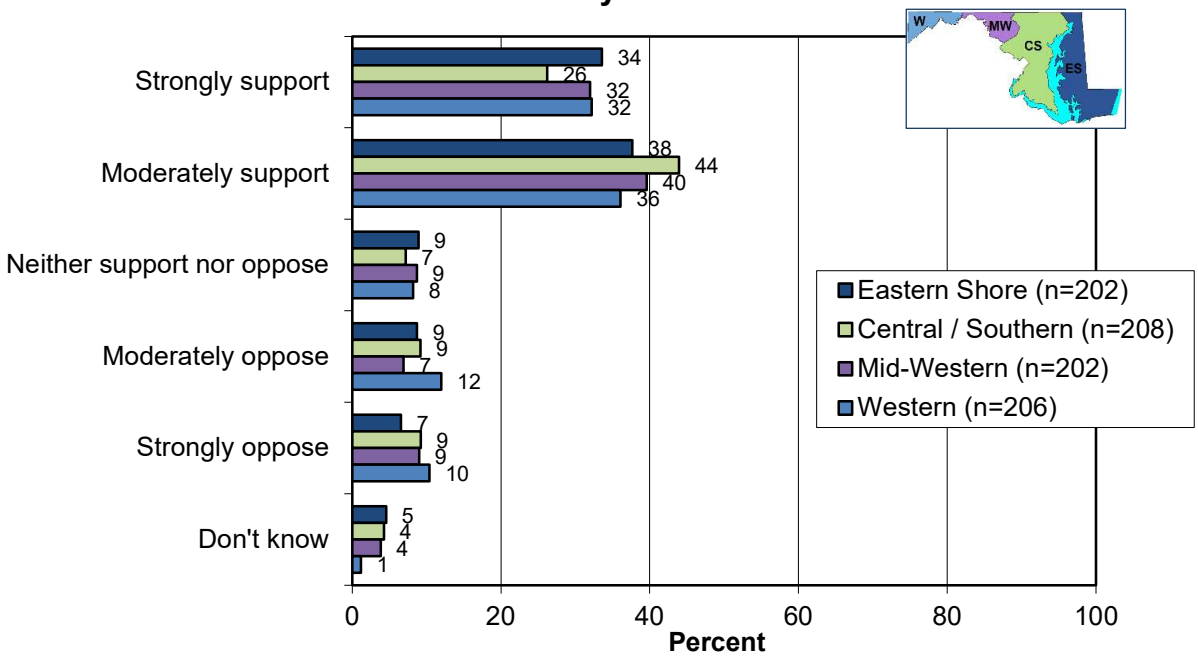
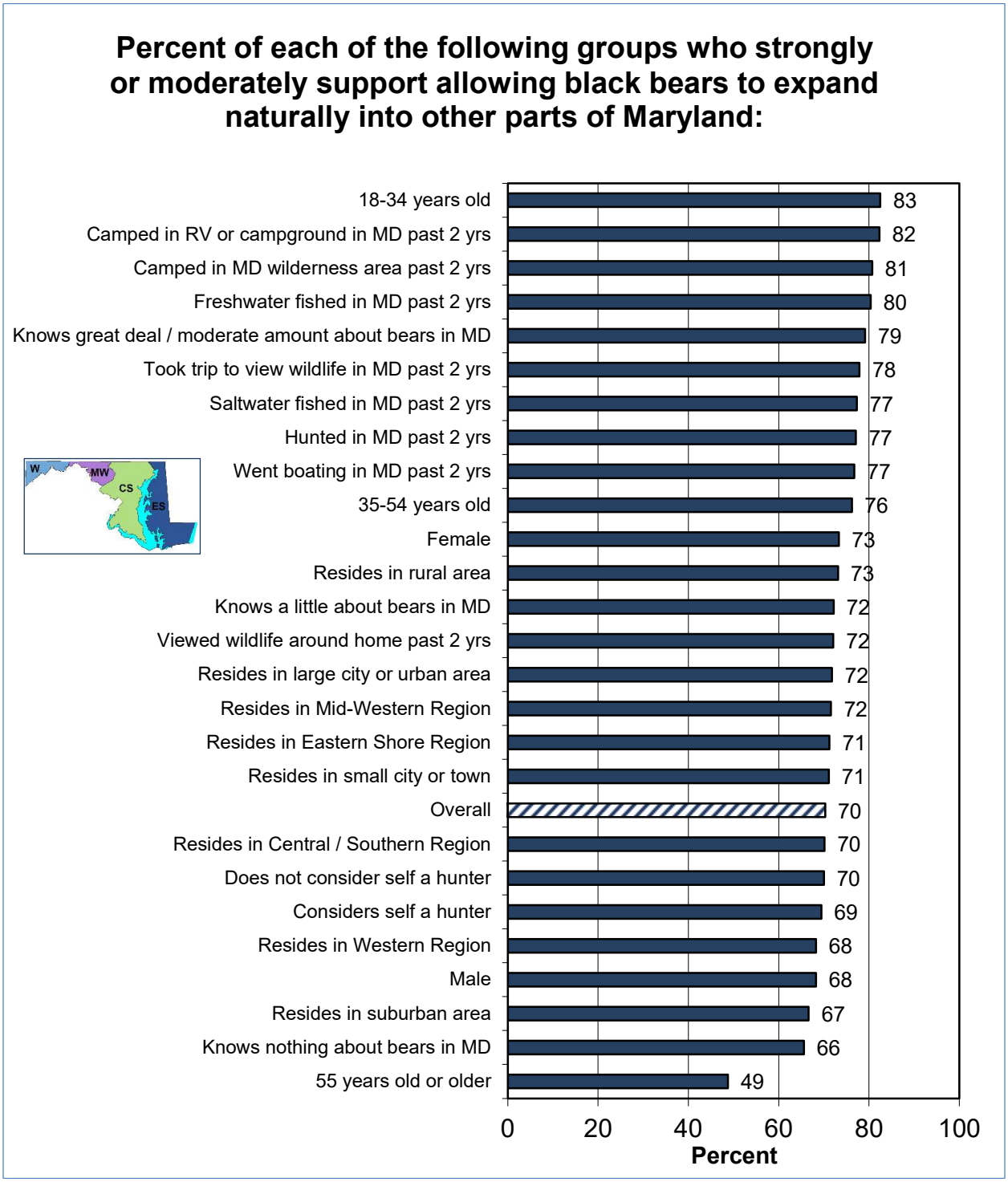
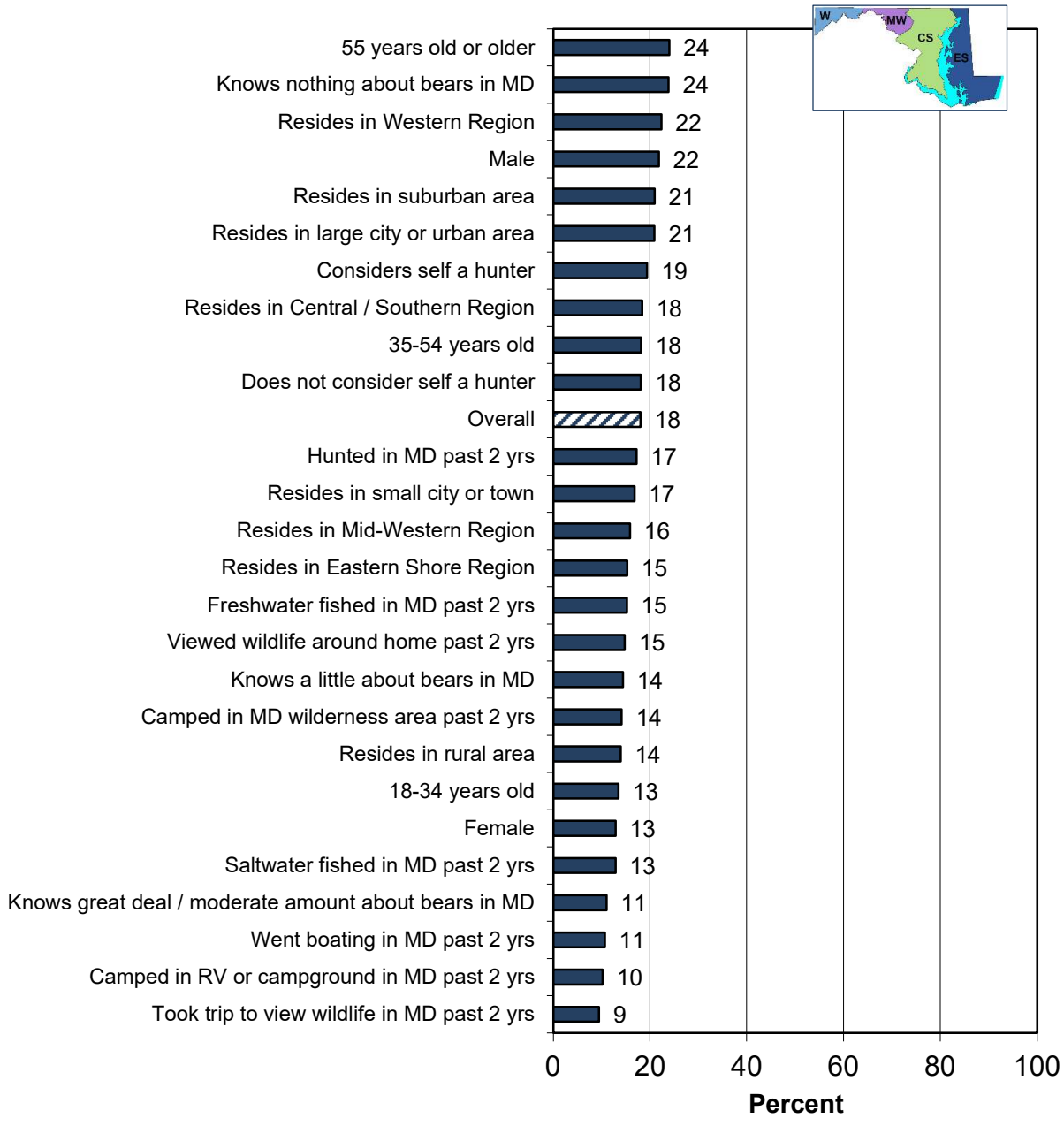


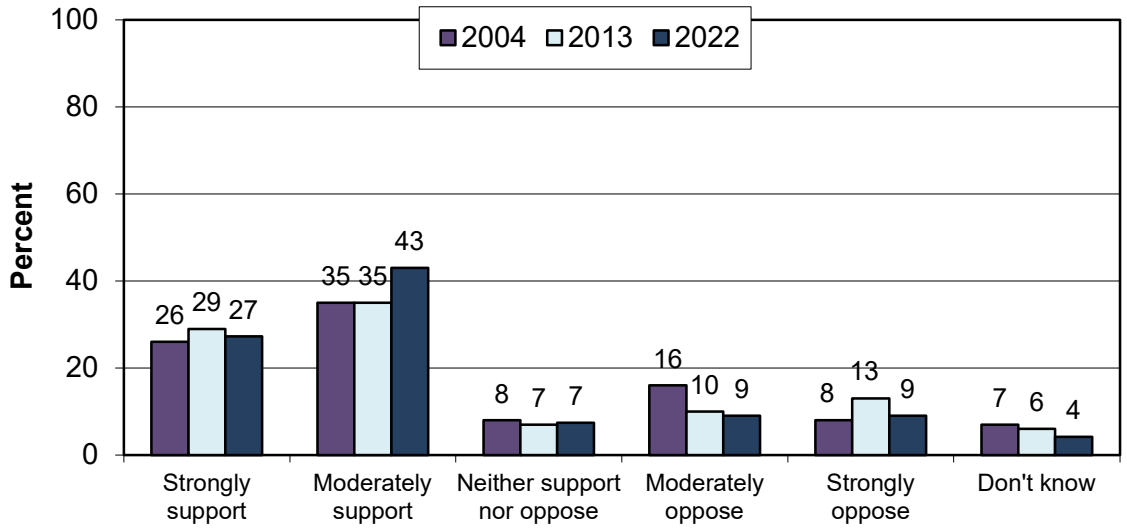
The groups most likely to support the natural expansion of black bears into other parts of Maryland are younger residents and those who went camping or freshwater fishing in the past 2 years.



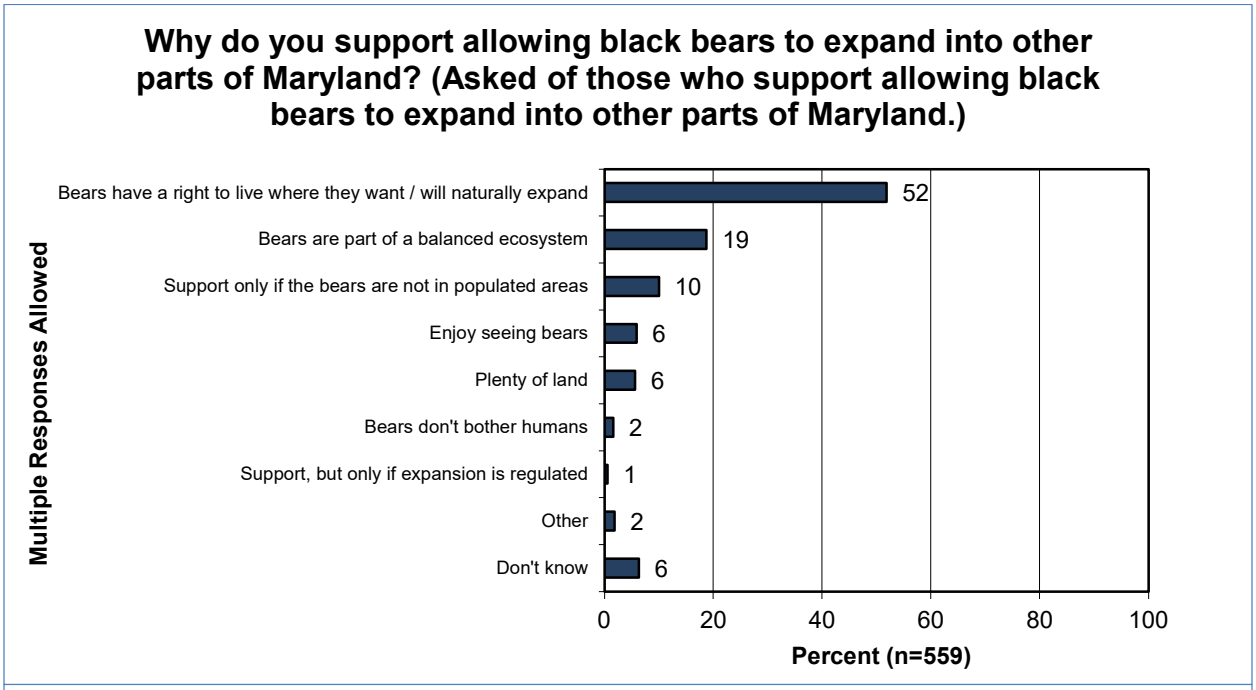
Percent of each of the following groups who strongly or moderately oppose allowing black bears to expand naturally into other parts of Maryland:

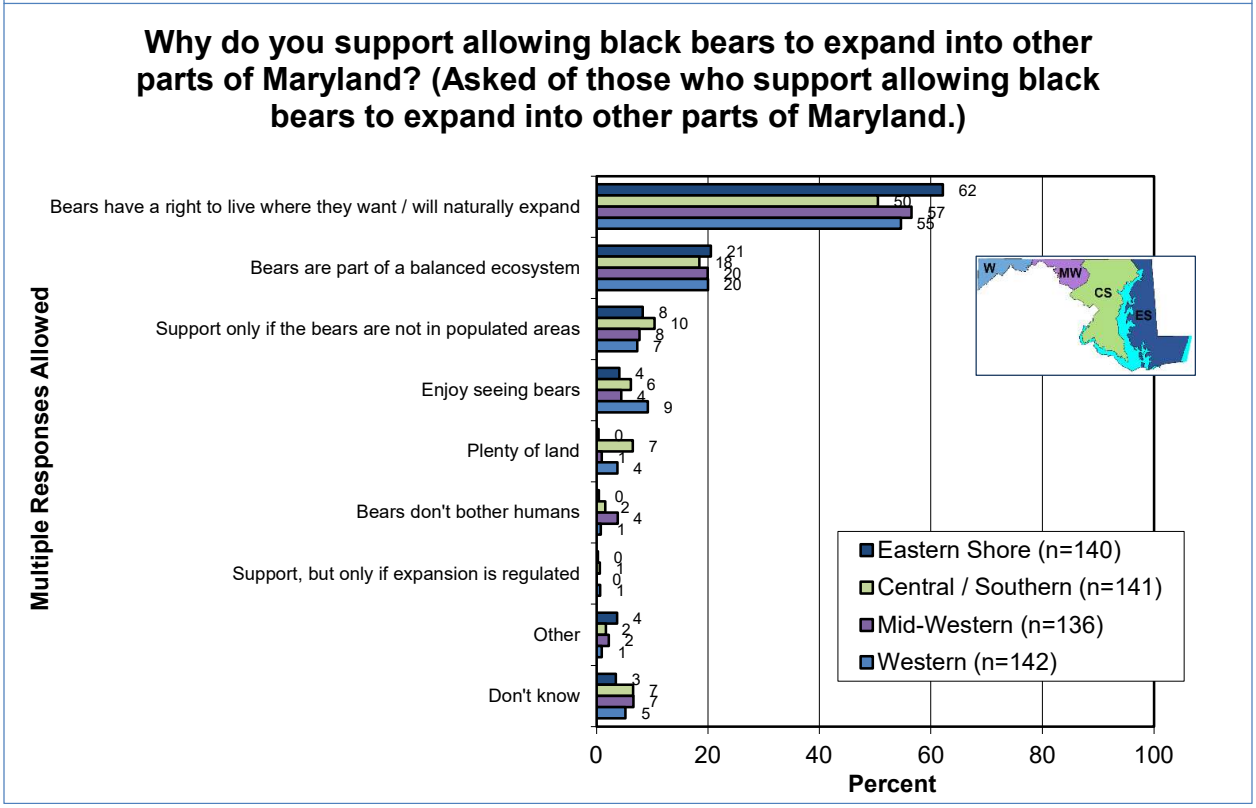


For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?

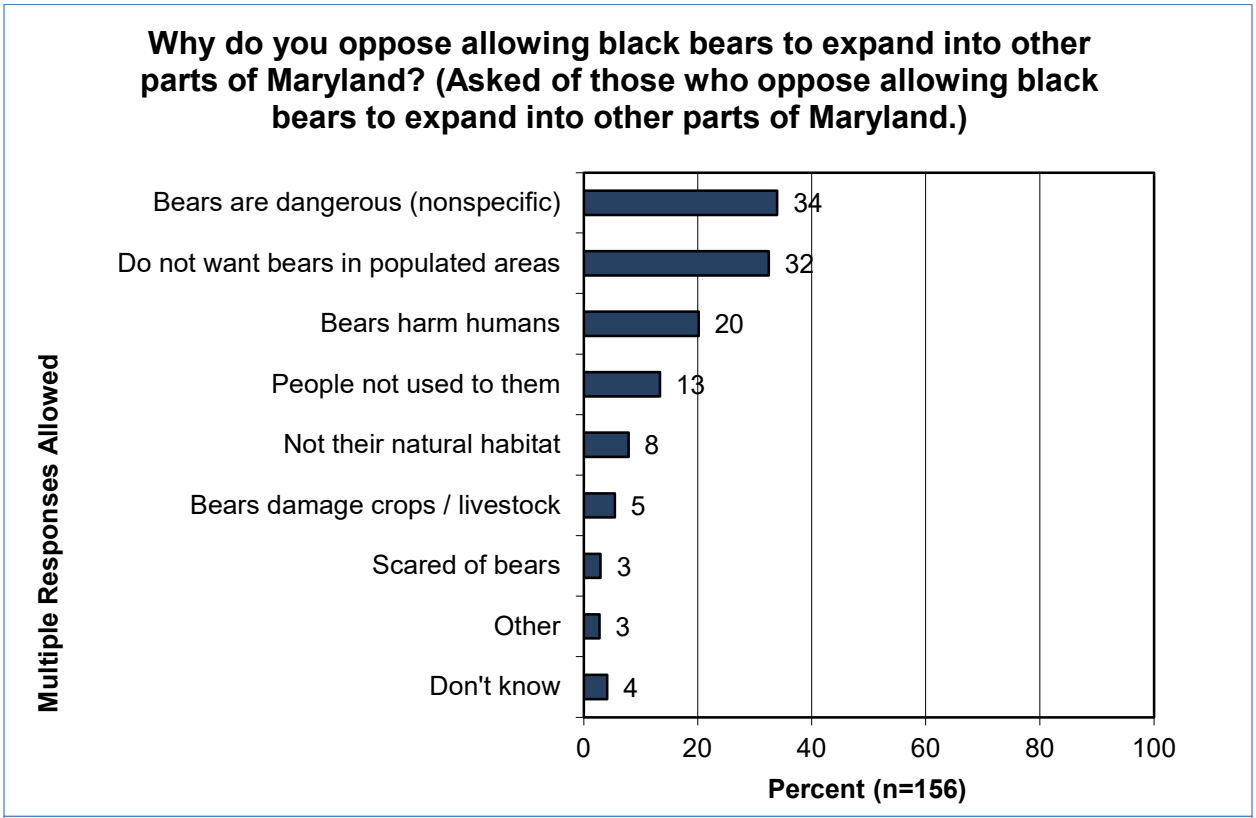


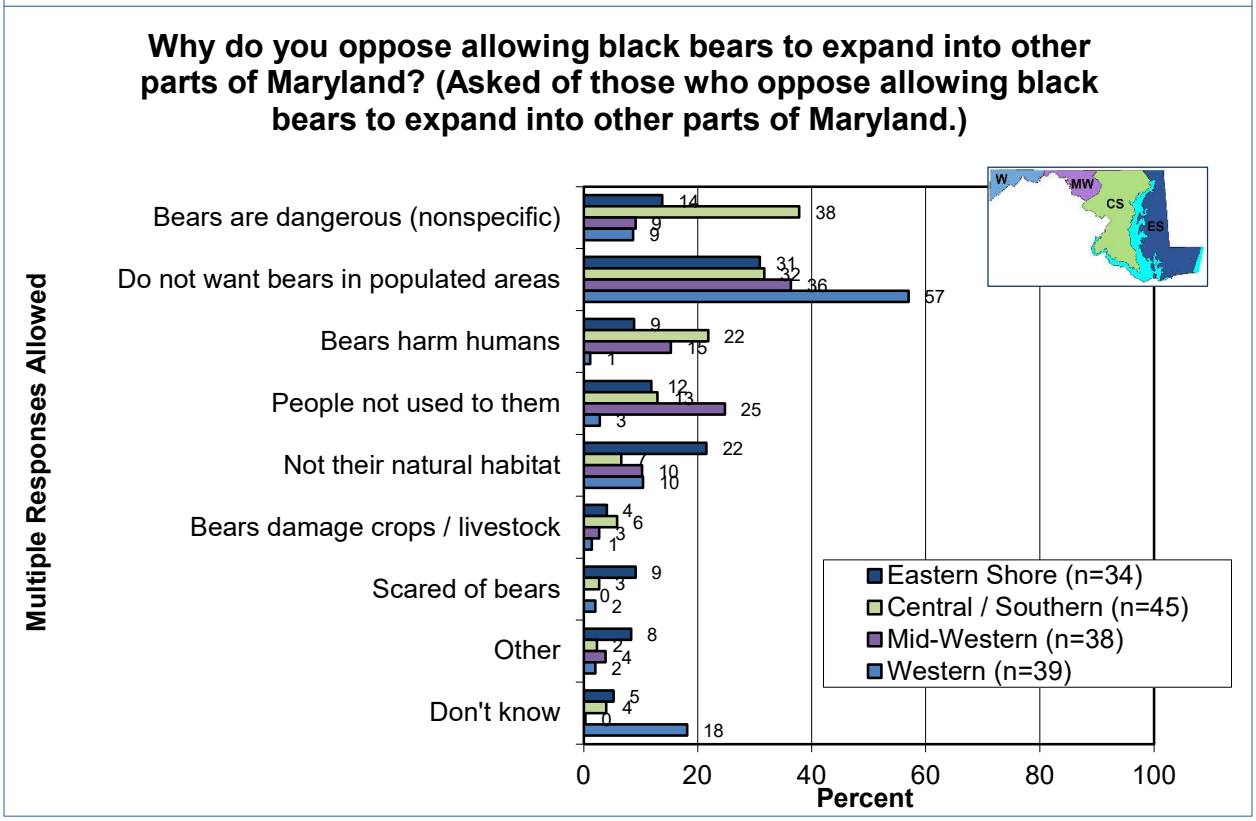
A majority of those who support expansion (52%) said that bears have a right to live where they want.



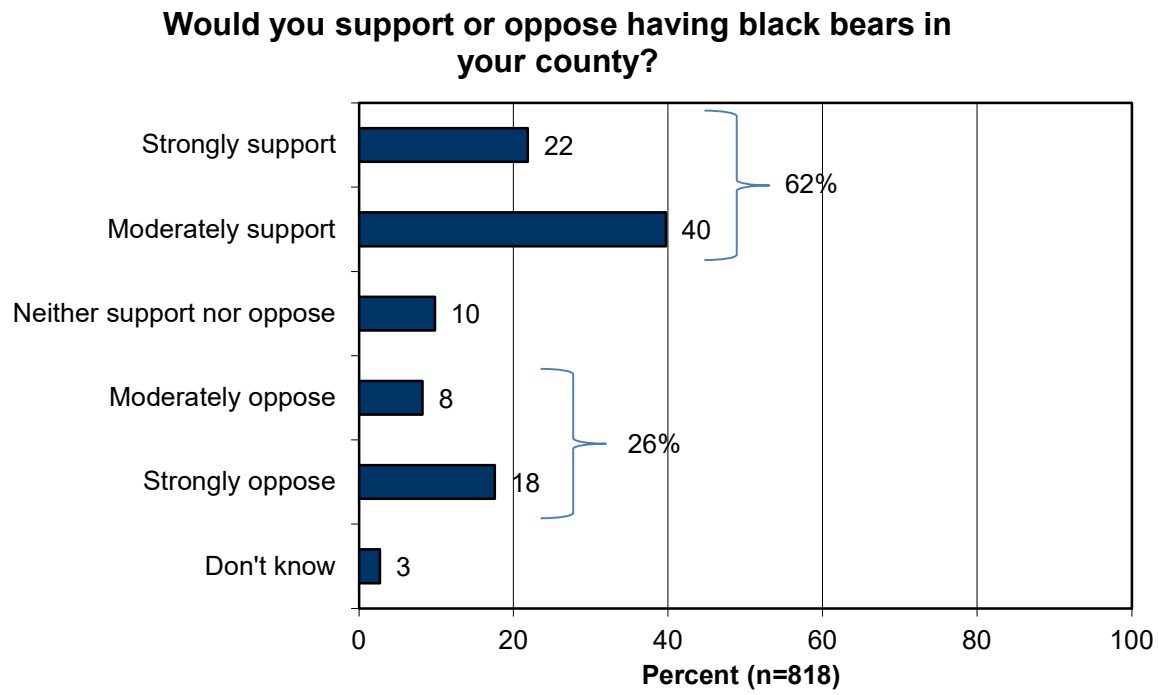


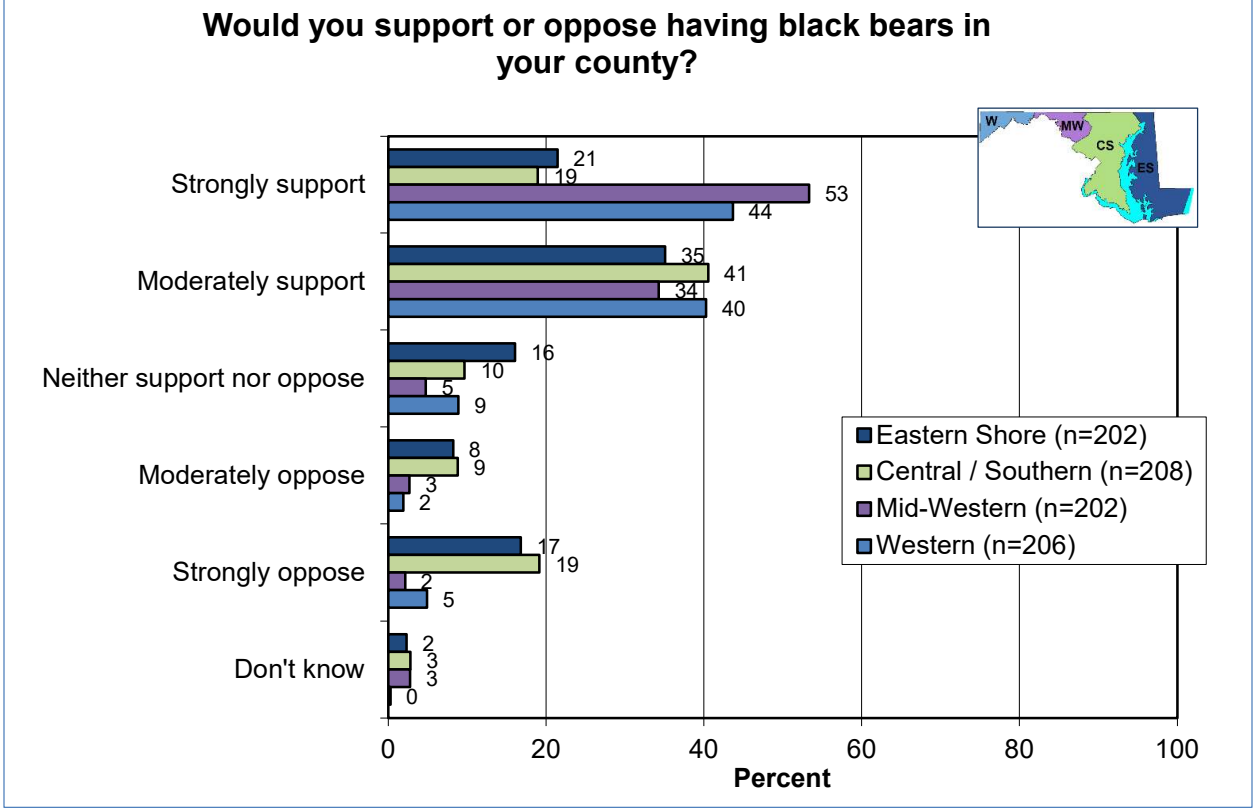
Those who oppose expansion most often said that bears are dangerous and they do not want bears in populated areas.



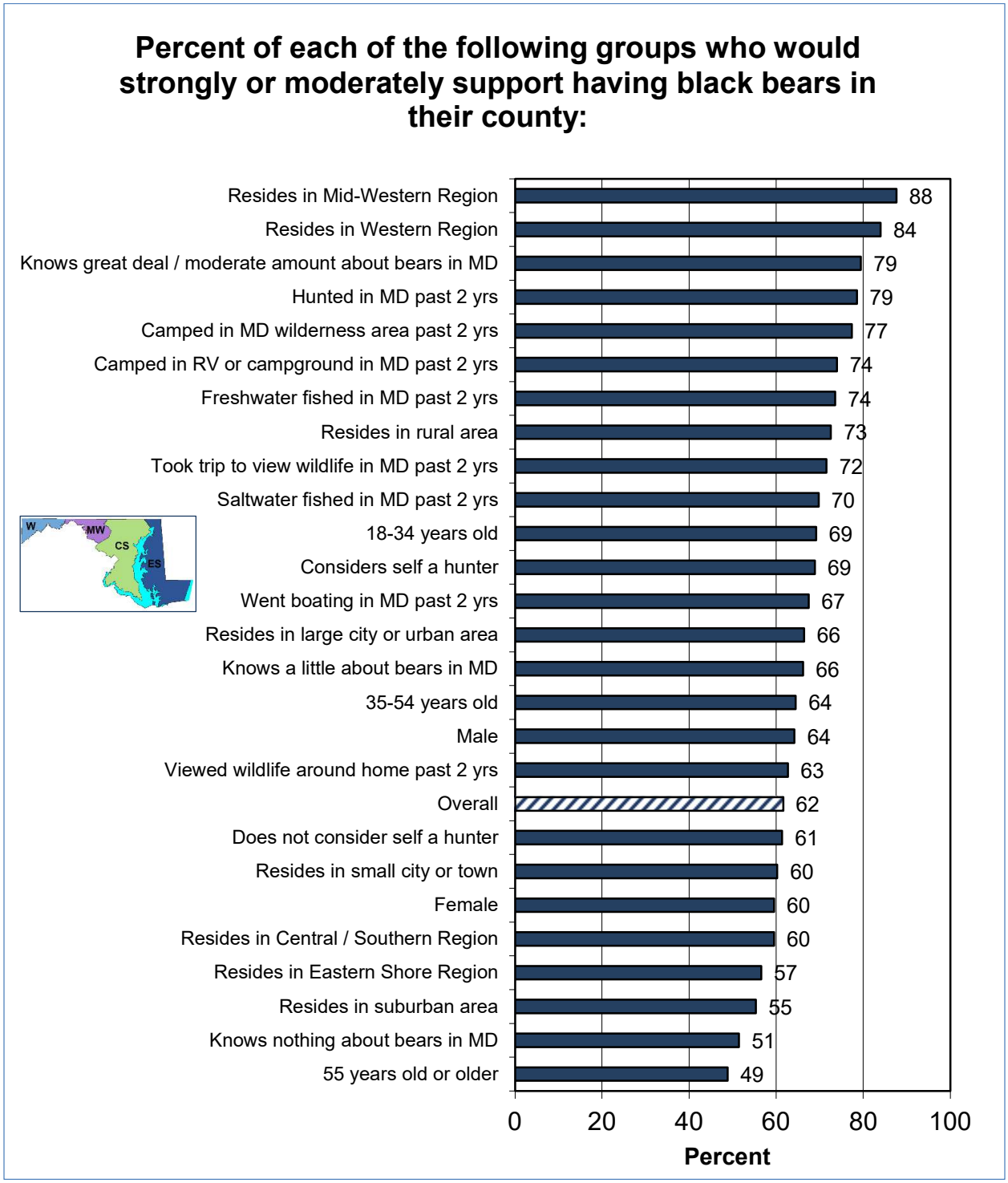


A majority of residents (62%) would support having black bears in their county; however, 26% would oppose.

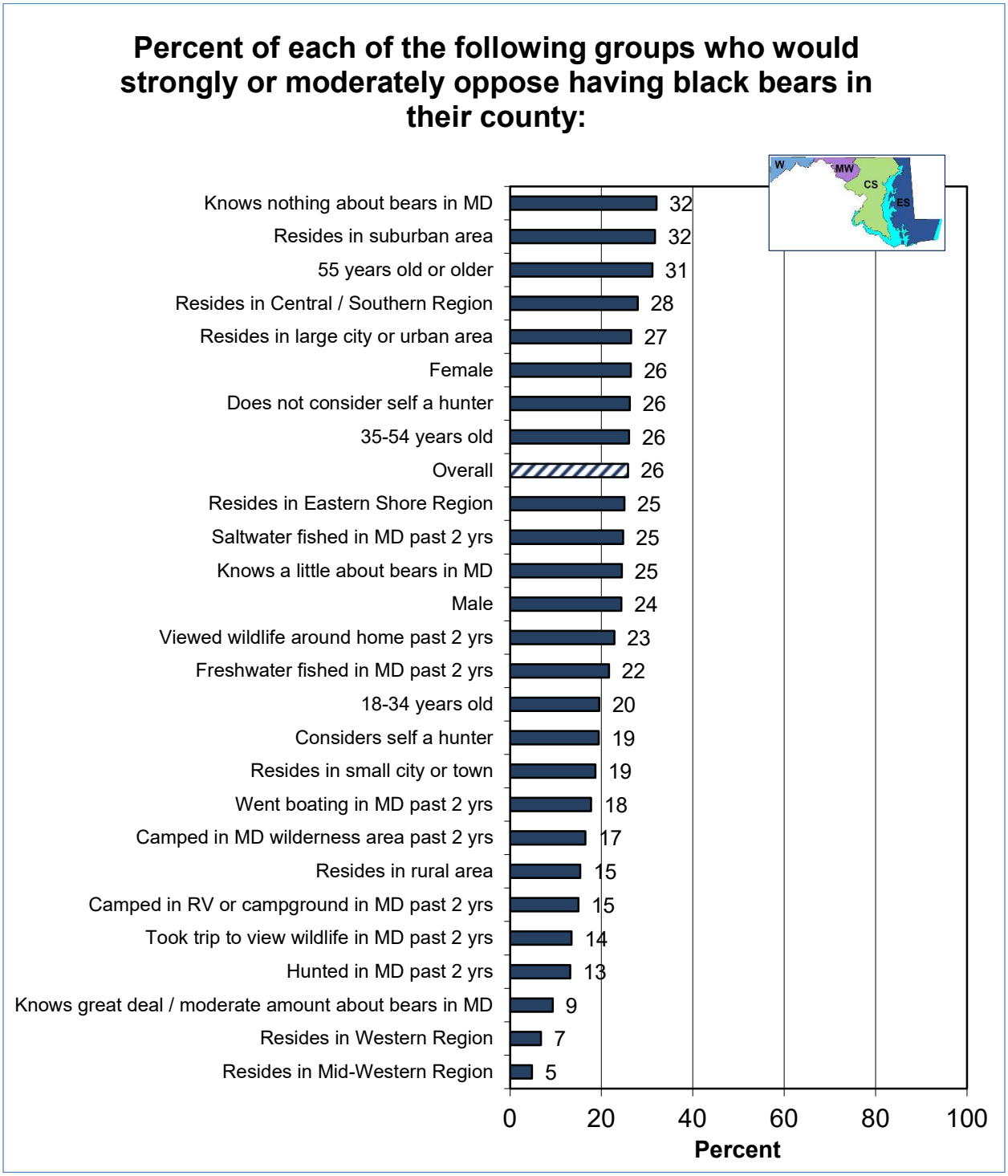




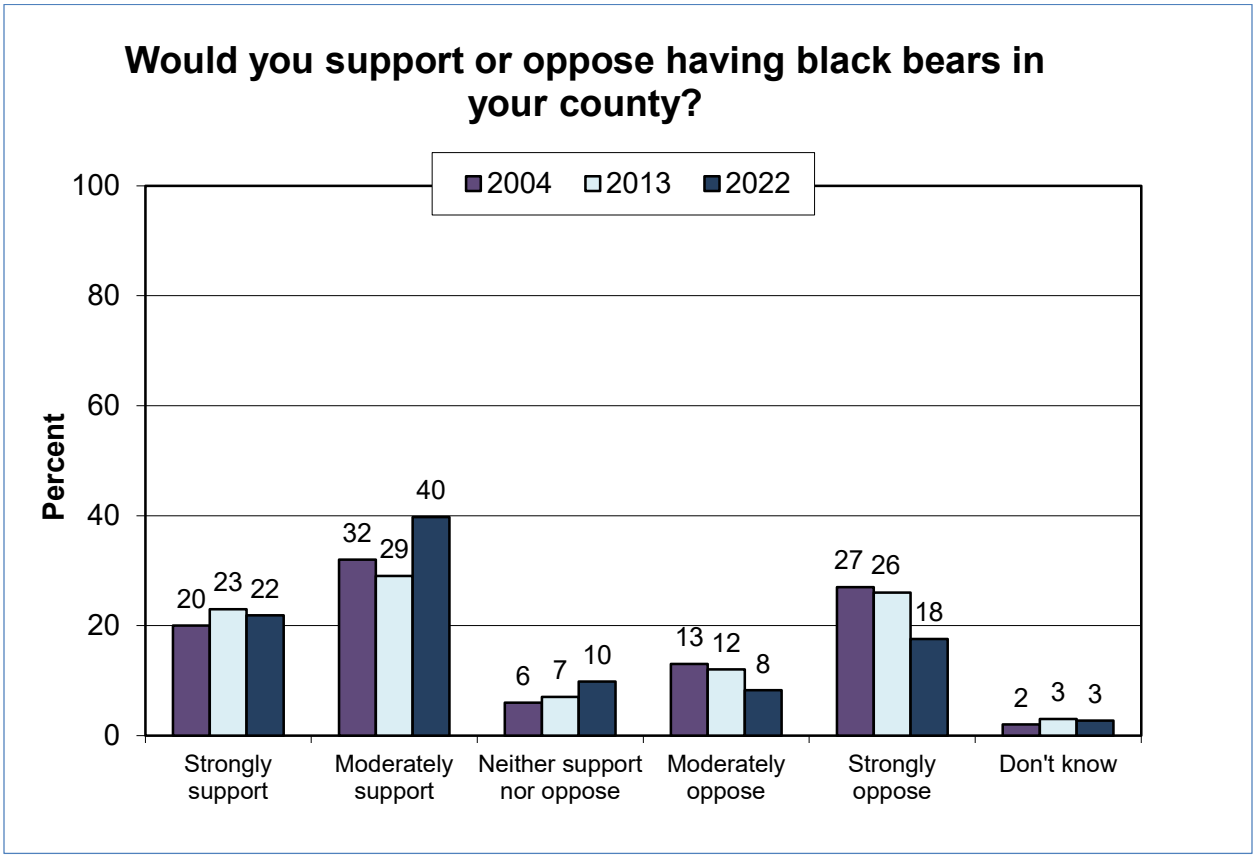
The groups with the most support for having bears in their county are Mid-Western and Western Region residents, those knowledgeable about bears, and those who hunted in the past 2 years.



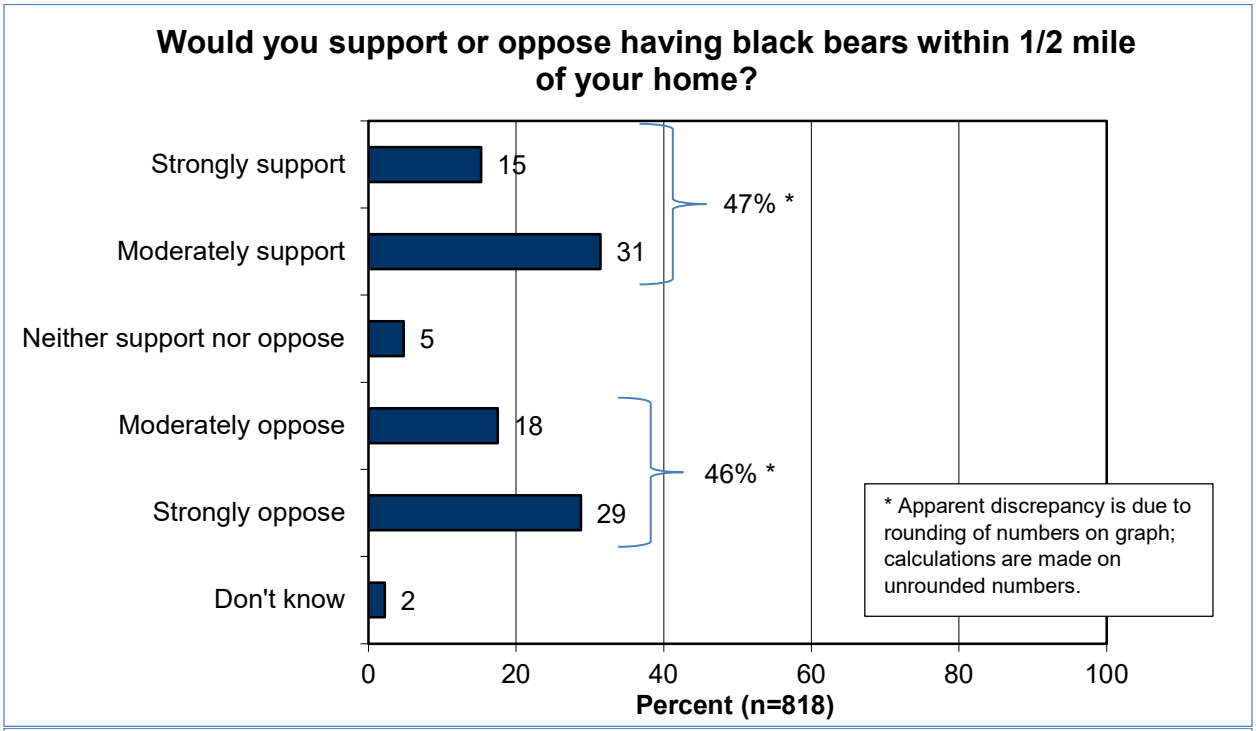
The groups with the most opposition to having bears in their county are those who know nothing about bears and suburban residents.

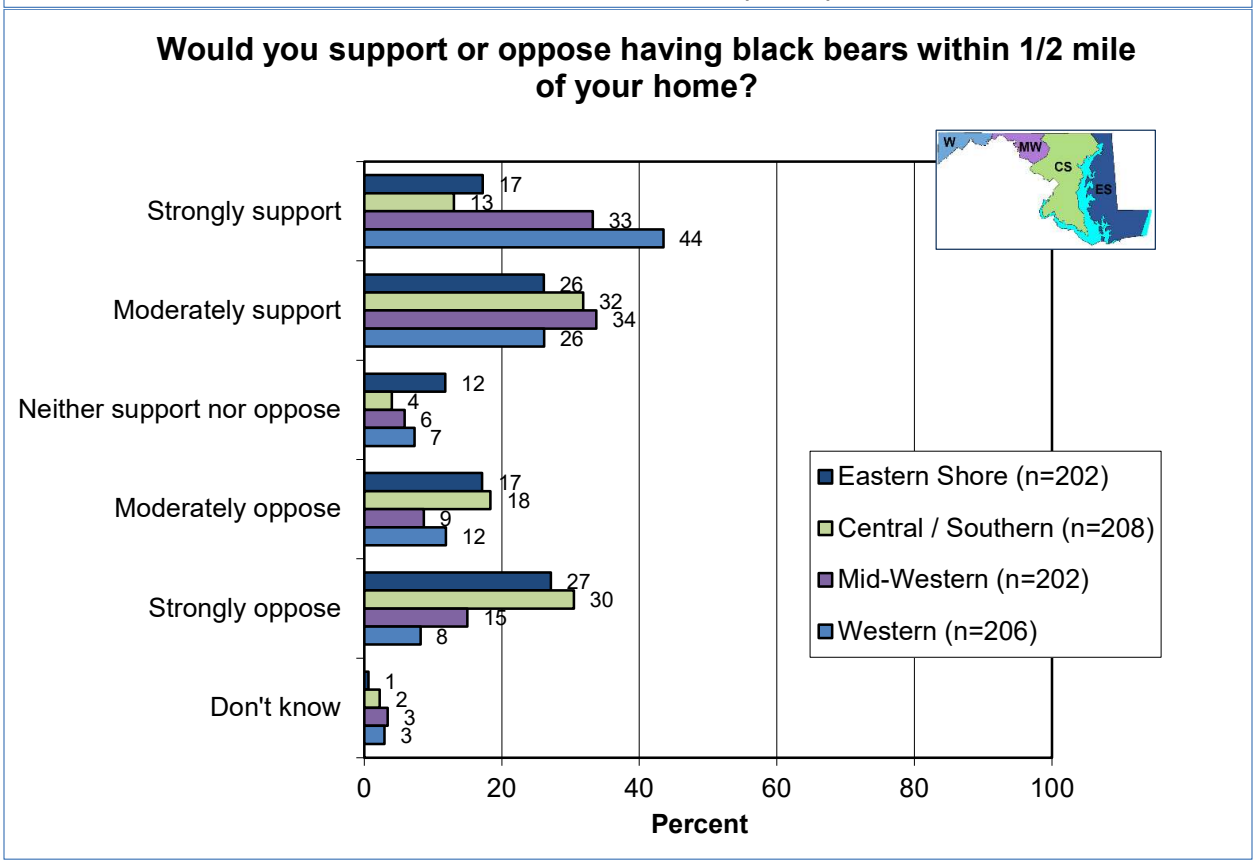


As with the question about having black bears in Maryland, there is an increase in support for having black bears in the county since the previous surveys.

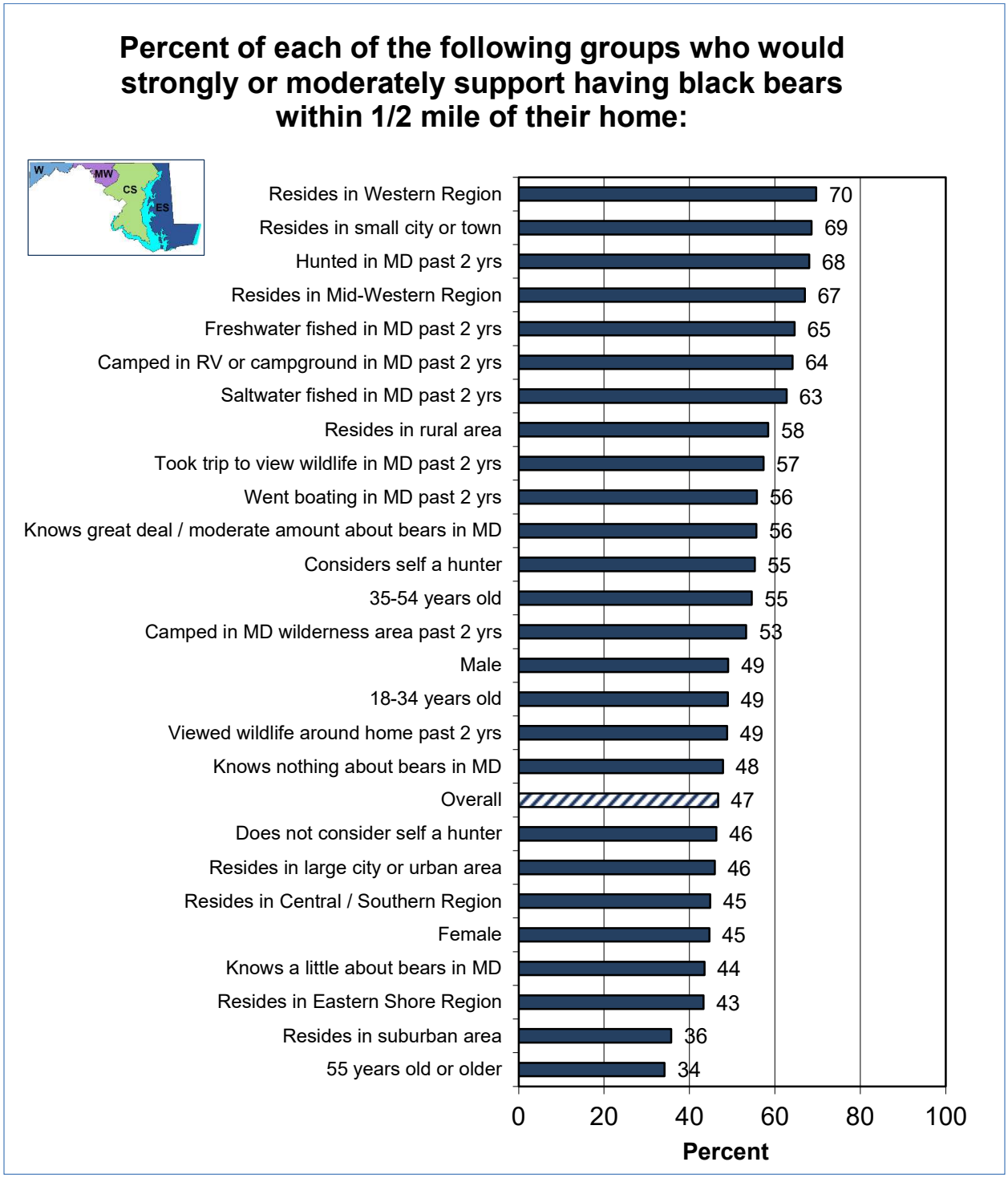


Residents are split on having black bears within 1/2 mile of their home: 47% would support and 46% would oppose.

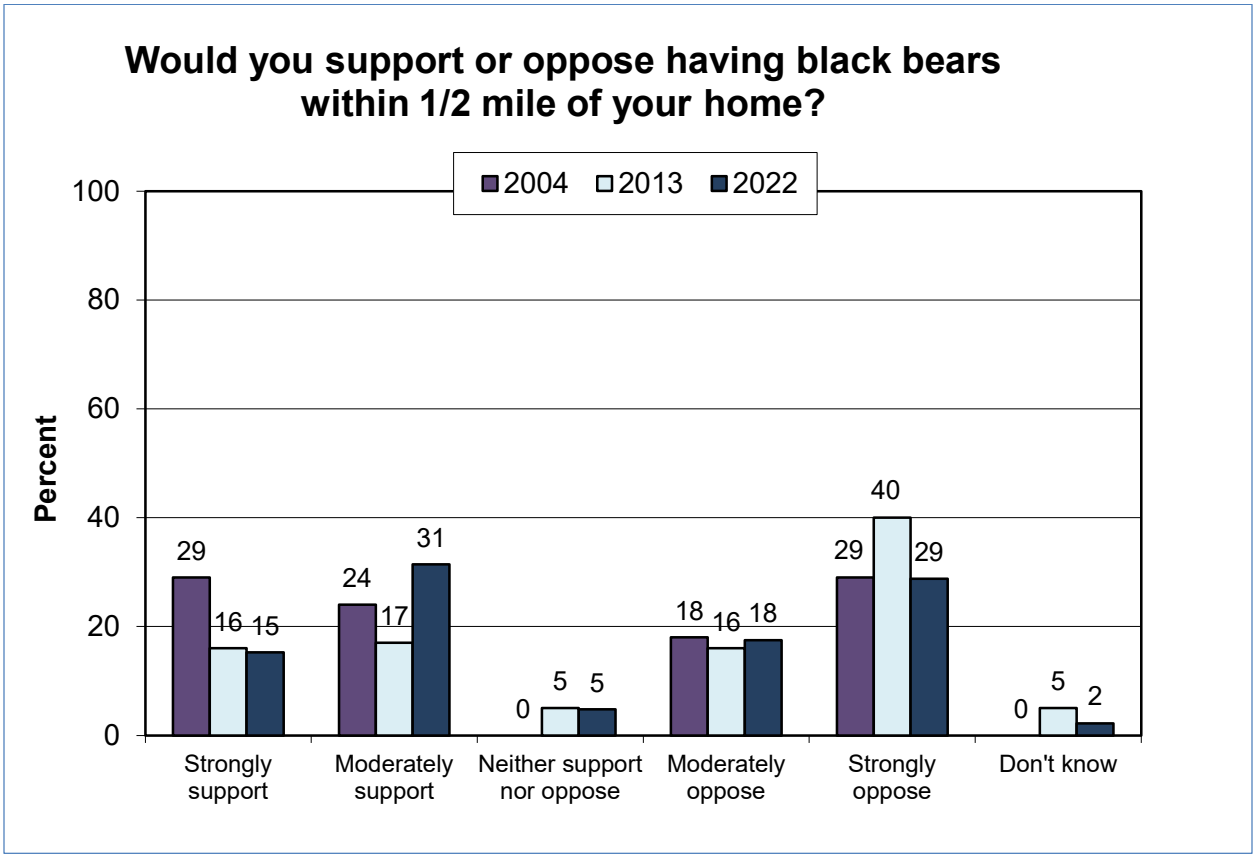




Groups most likely to support having black bears within 1/2 mile of their home are Western Region residents, small city or town residents, those who hunted in the past 2 years, and Mid-Western Region residents.



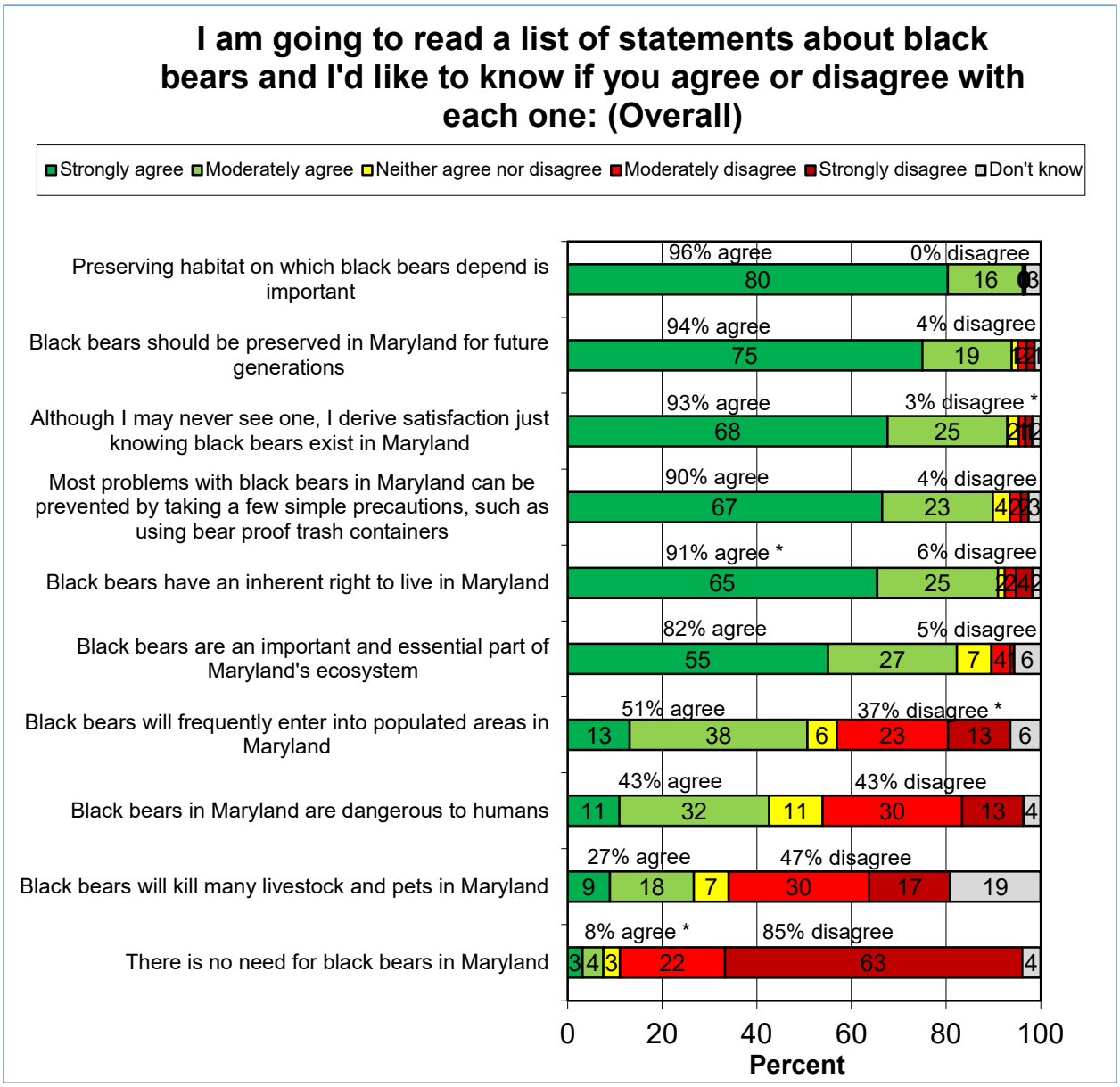
Percent of each of the following groups who would strongly or moderately oppose having black bears within 1/2 mile of their home:


Would you support or oppose having black bears within 1/2 mile of your home?
2004
2013
2022
Percent
100
80
60
40
20
0
29
16
15
24
17
31
0
5
5
18
16
18
29
40
29
0
5
2
Strongly support
Moderately support
Neither support nor oppose
Moderately oppose
Strongly oppose
Don't know

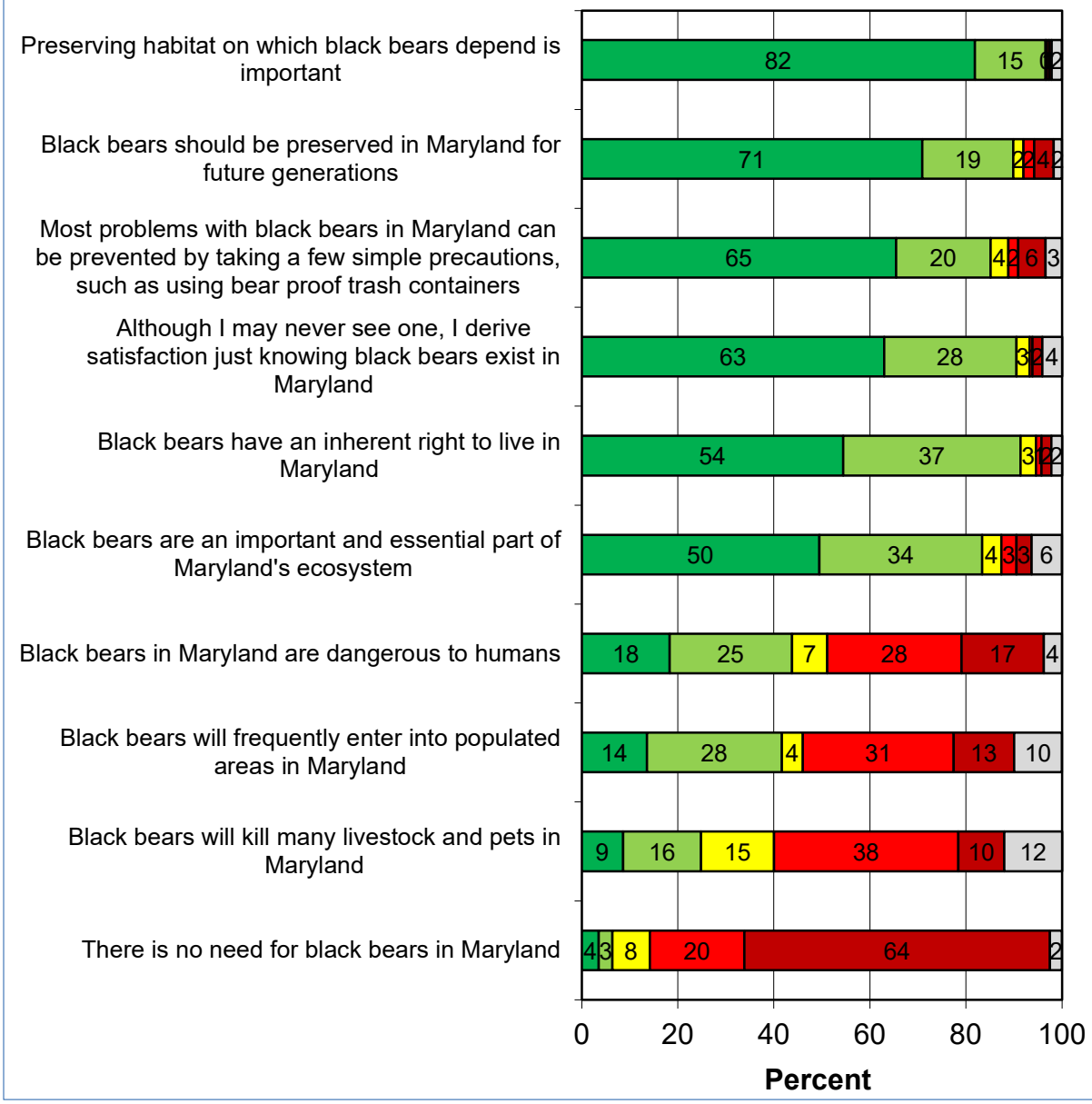
WILDLIFE VALUE STATEMENTS ABOUT BLACK BEARS

The survey asked residents if they agreed or disagreed with 10 statements about black bears. As the graph shows, very high percentages agreed with statements regarding the well-being of bears and their habitat, their value to the ecosystem and future generations, and their right to live in the state. At the bottom, there is more disagreement than agreement about the danger of bears to livestock and pets, and very few residents agree that there is no need for black bears in Maryland.

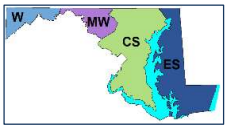
All series graphs are presented in descending order of the first response option; this graph is shown in descending order of *strongly* agree percentages. Also, some summations, which are only on the graphs of overall results, appear to be off by 1% because they are summed on unrounded numbers; these instances are denoted by an asterisk. The graph below is followed by regional results and trend analyses of each statement.

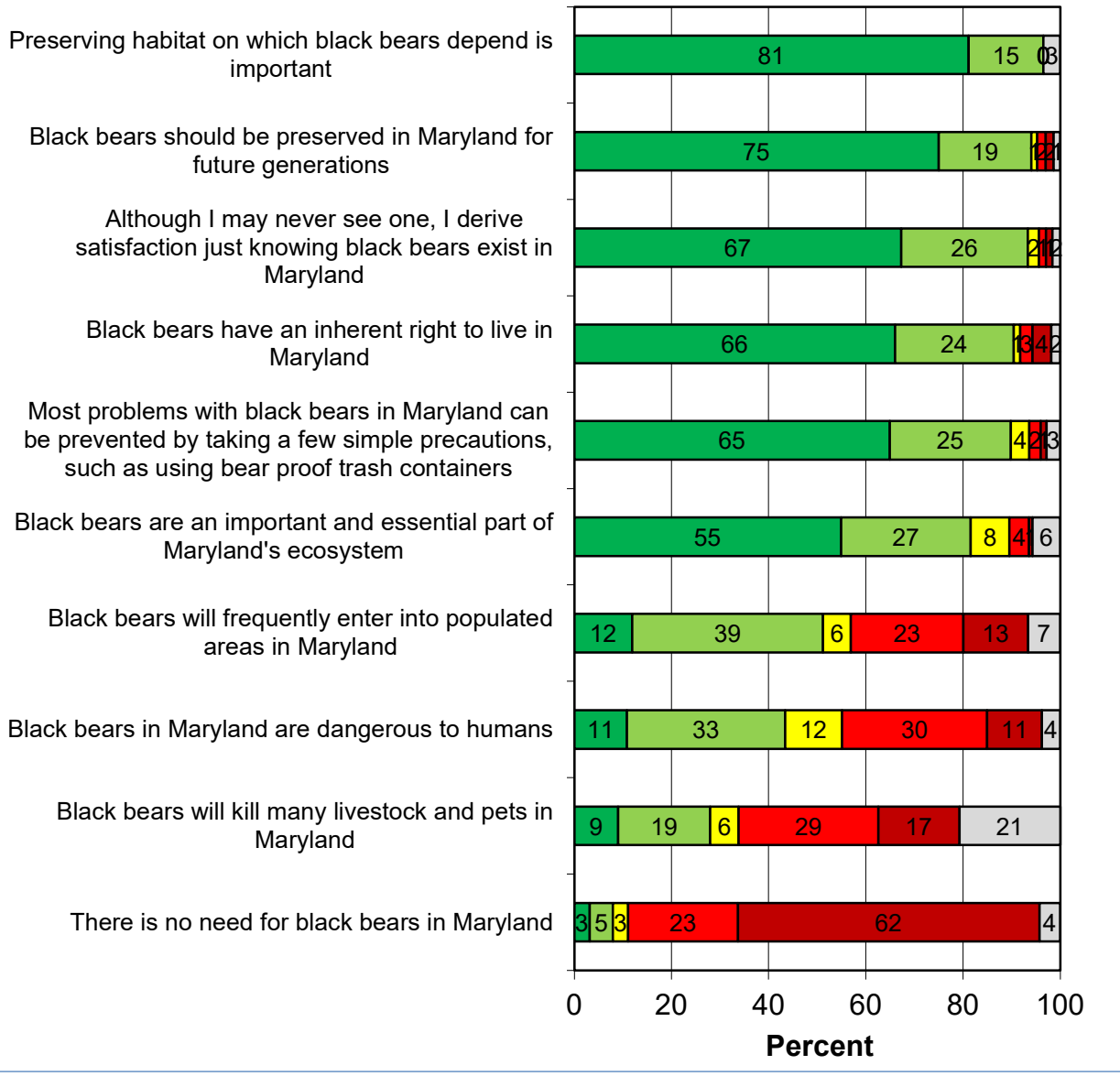


I am going to read a list of statements about black bears and I'd like to know if you agree or disagree with each one: (Eastern Shore)

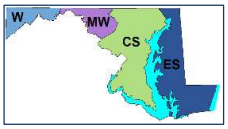


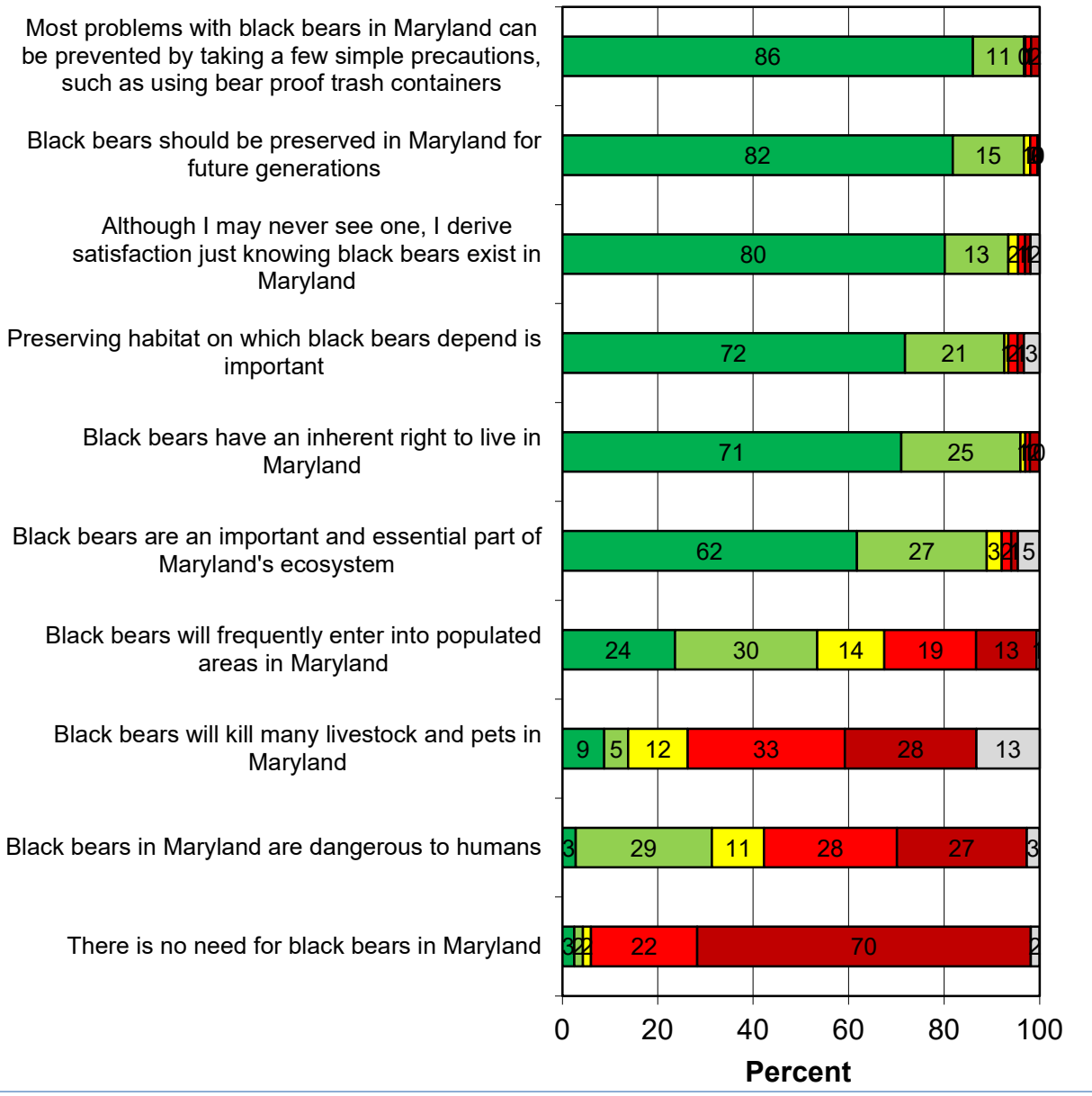
I am going to read a list of statements about black bears and I'd like to know if you agree or disagree with each one: (Central / Southern)



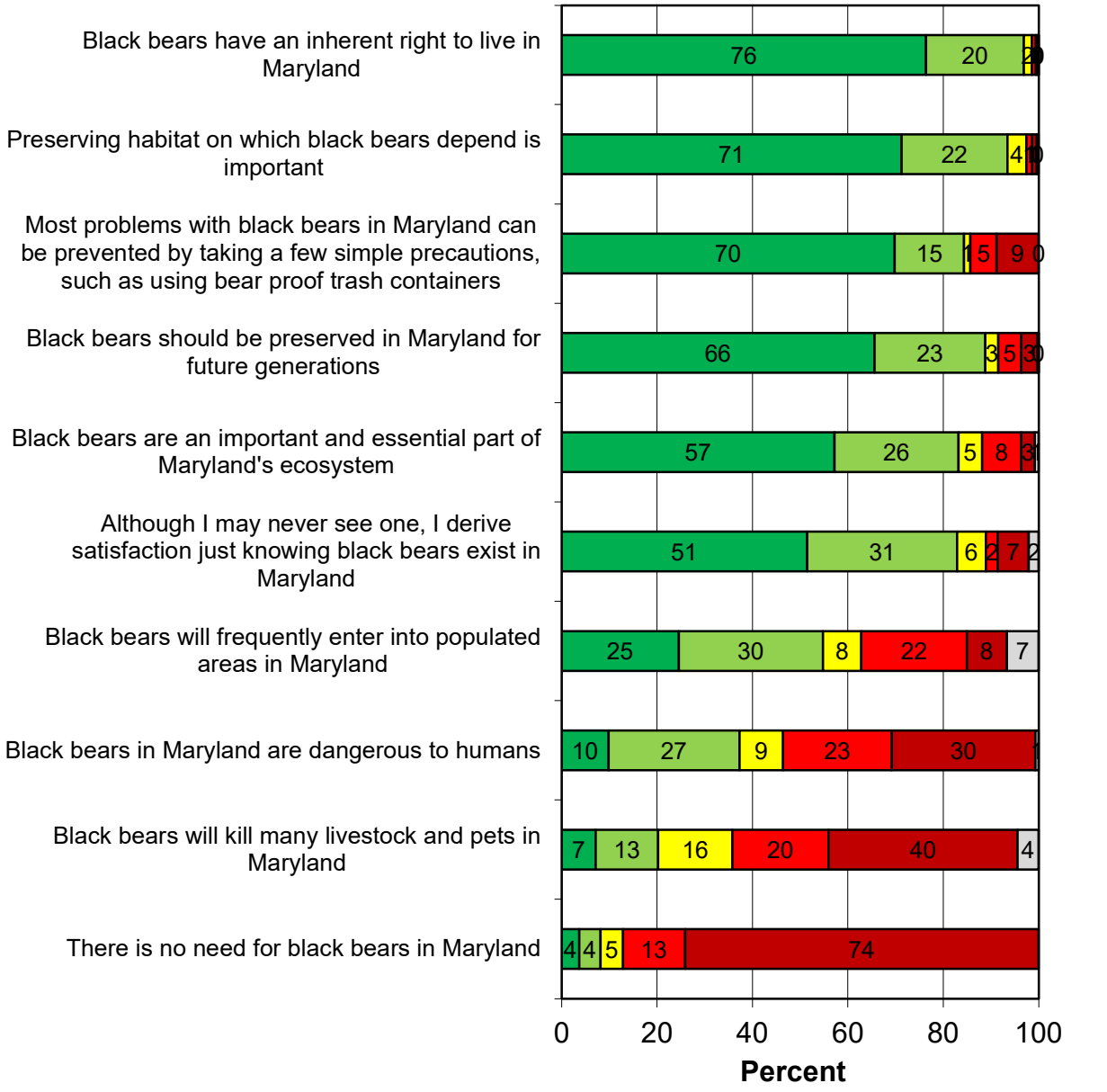


I am going to read a list of statements about black bears and I'd like to know if you agree or disagree with each one: (Mid-Western)

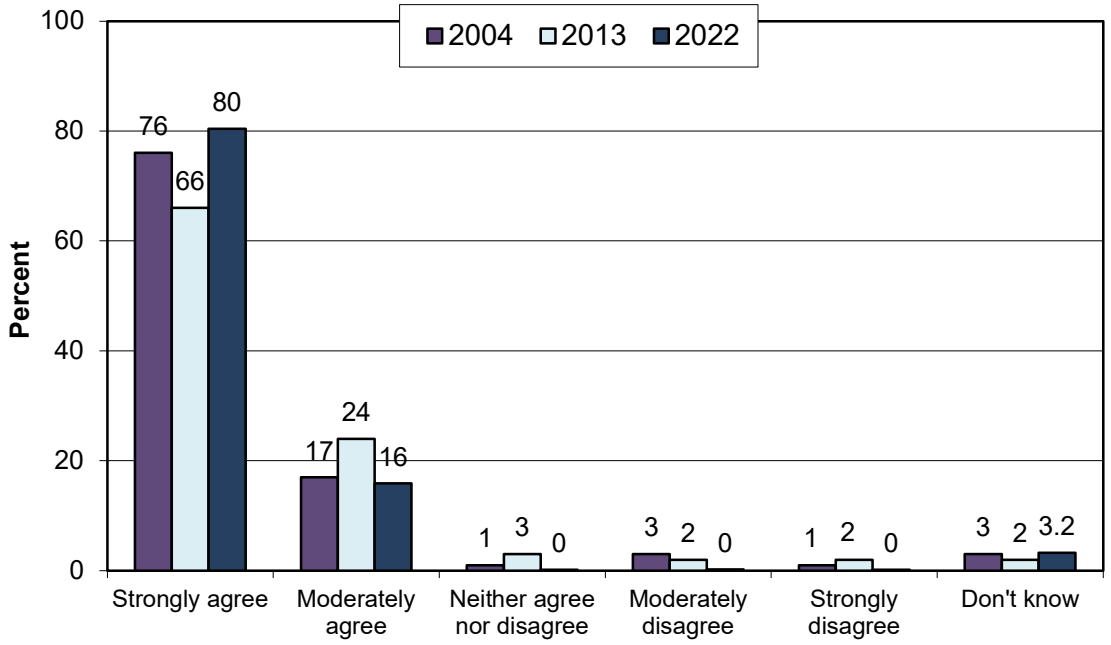




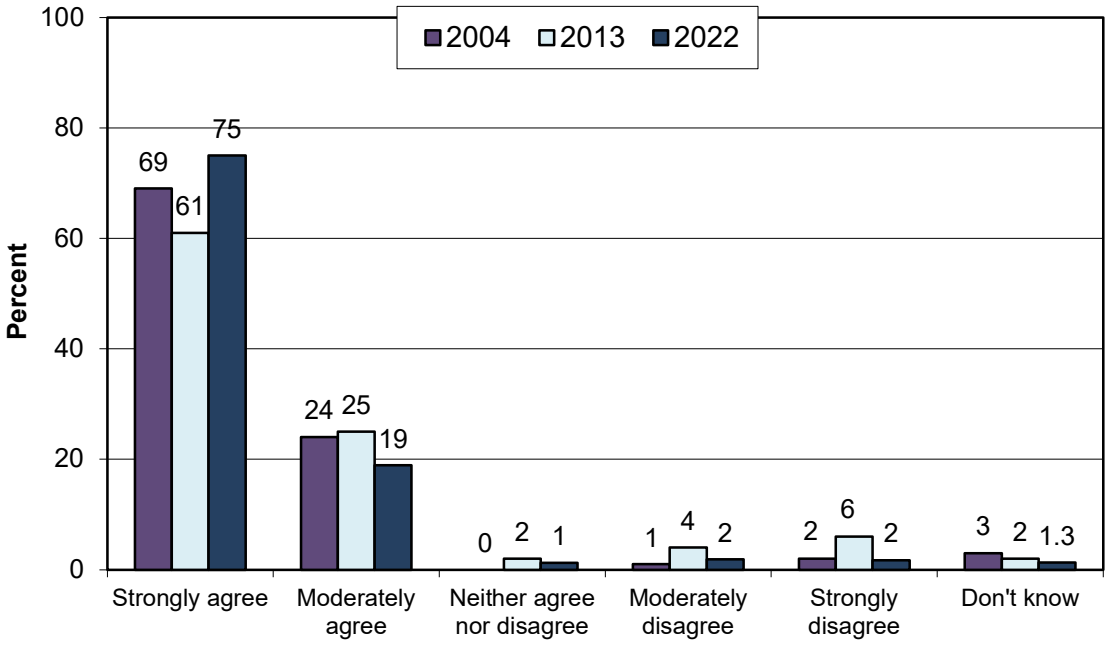
I am going to read a list of statements about black bears and I'd like to know if you agree or disagree with each one: (Western)



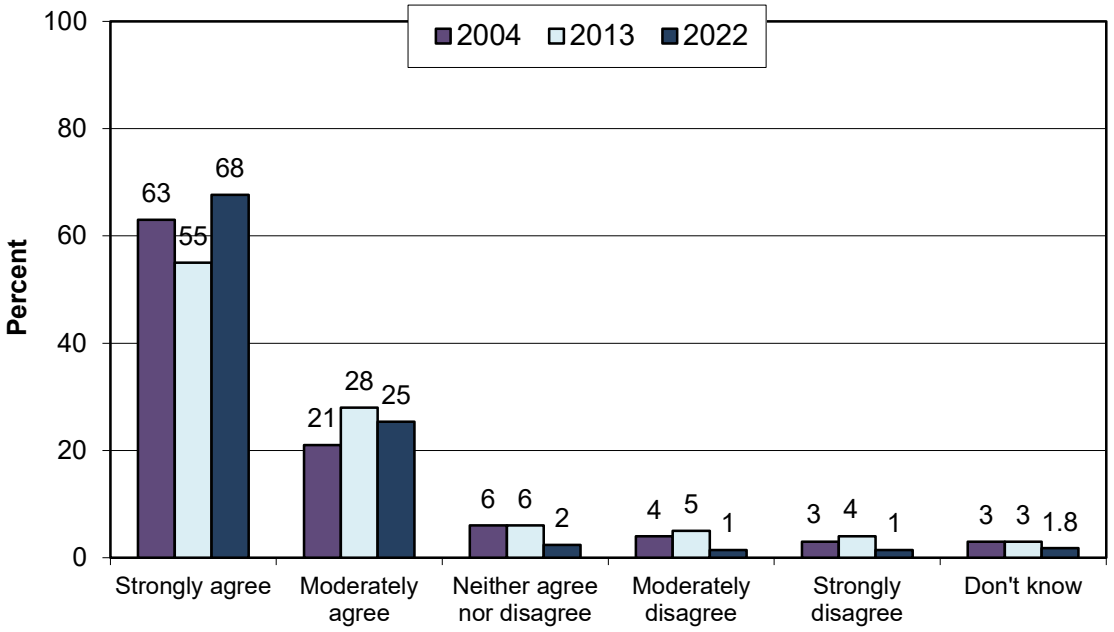
Preserving habitat on which black bears depend is important. (Do you agree or disagree with this statement?)



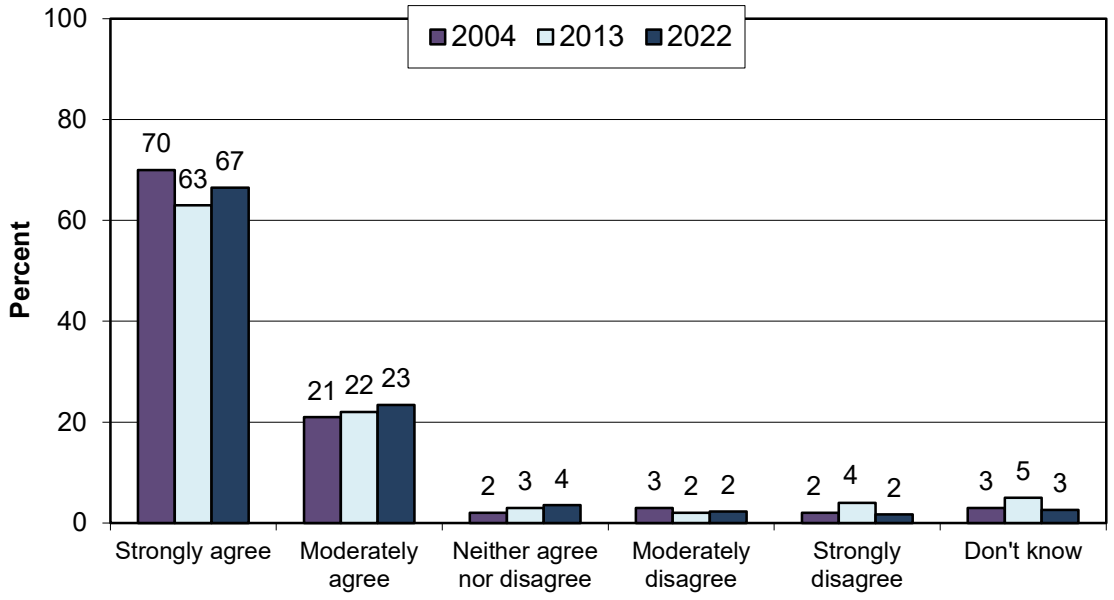
Black bears should be preserved in Maryland for future generations. (Do you agree or disagree with this statement?)



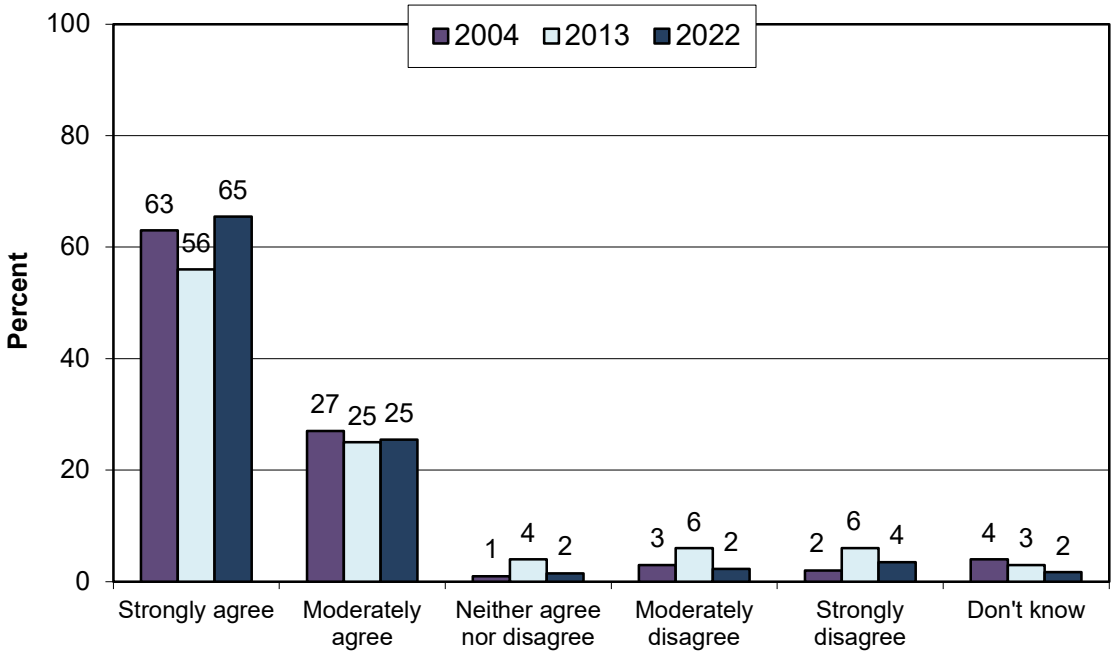
Although I may never see one, I derive satisfaction just knowing black bears exist in Maryland. (Do you agree or disagree with this statement?)



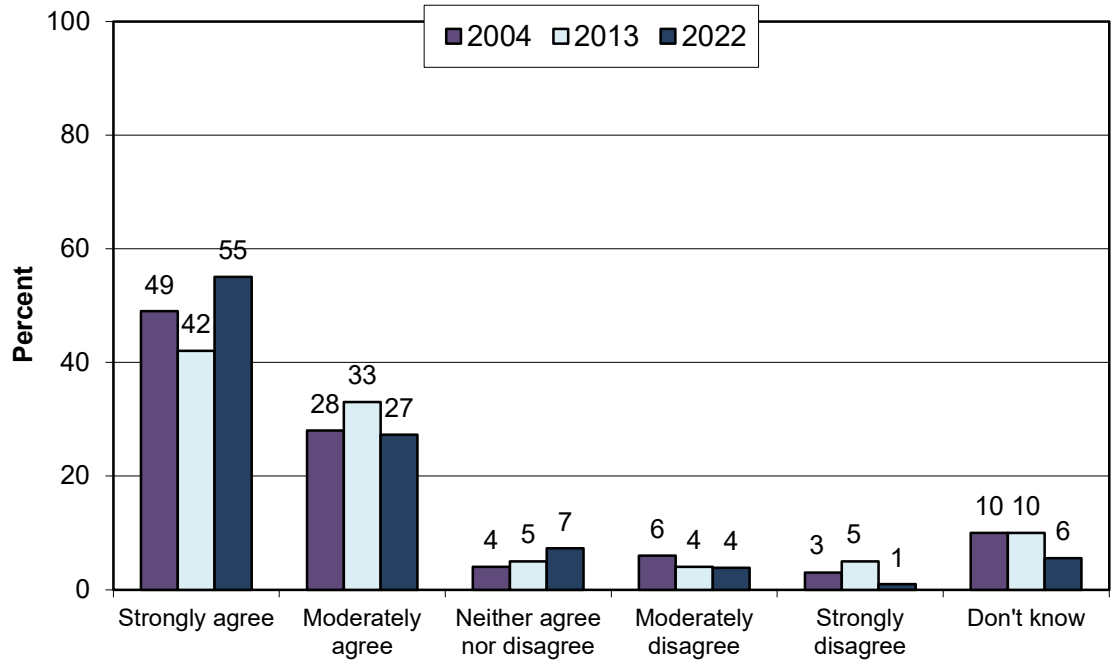
Most problems with black bears in Maryland can be prevented by taking a few simple precautions, such as using bear proof trash containers. (Do you agree or disagree with this statement?)



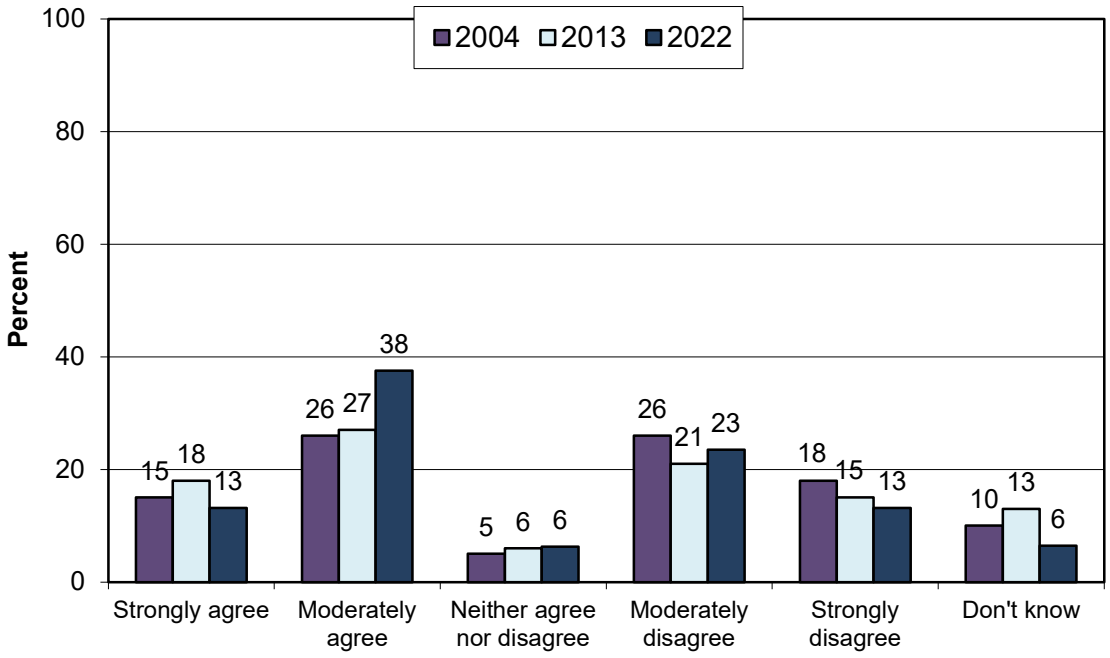
Black bears have an inherent right to live in Maryland. (Do you agree or disagree with this statement?)



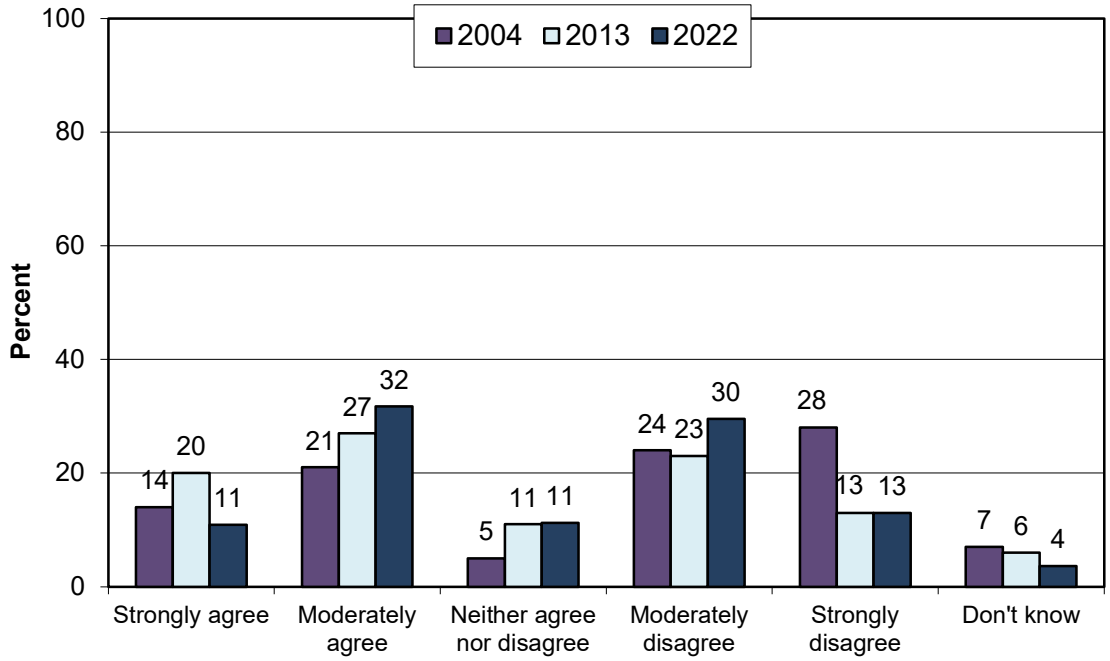
Black bears are an important and essential part of Maryland's ecosystem. (Do you agree or disagree with this statement?)



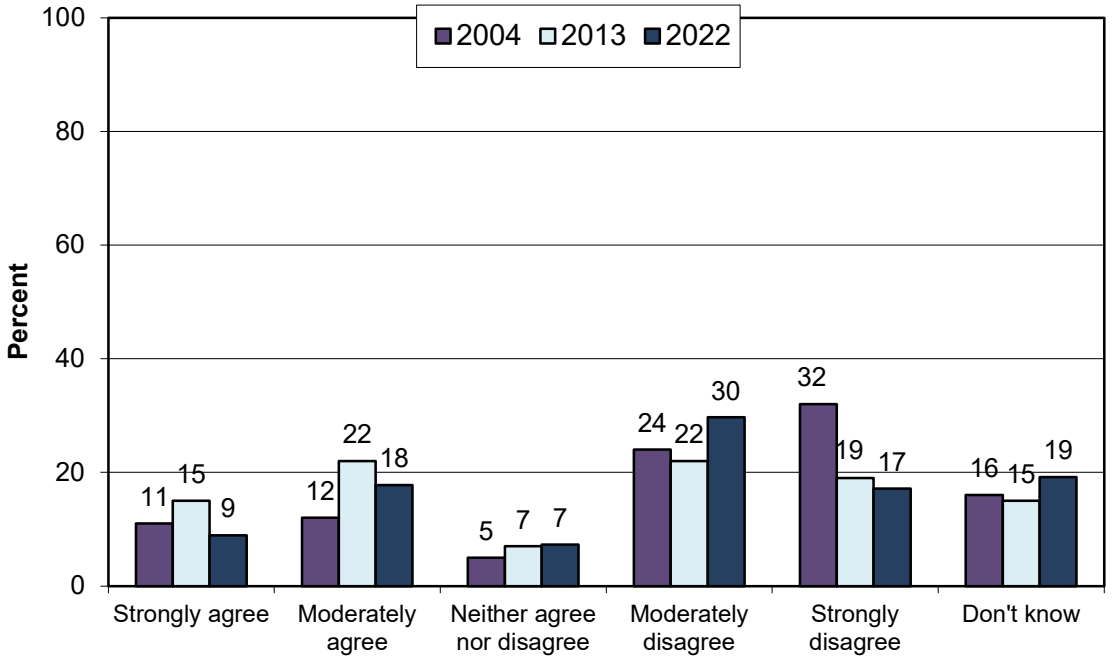
Black bears will frequently enter into populated areas in Maryland. (Do you agree or disagree with this statement?)



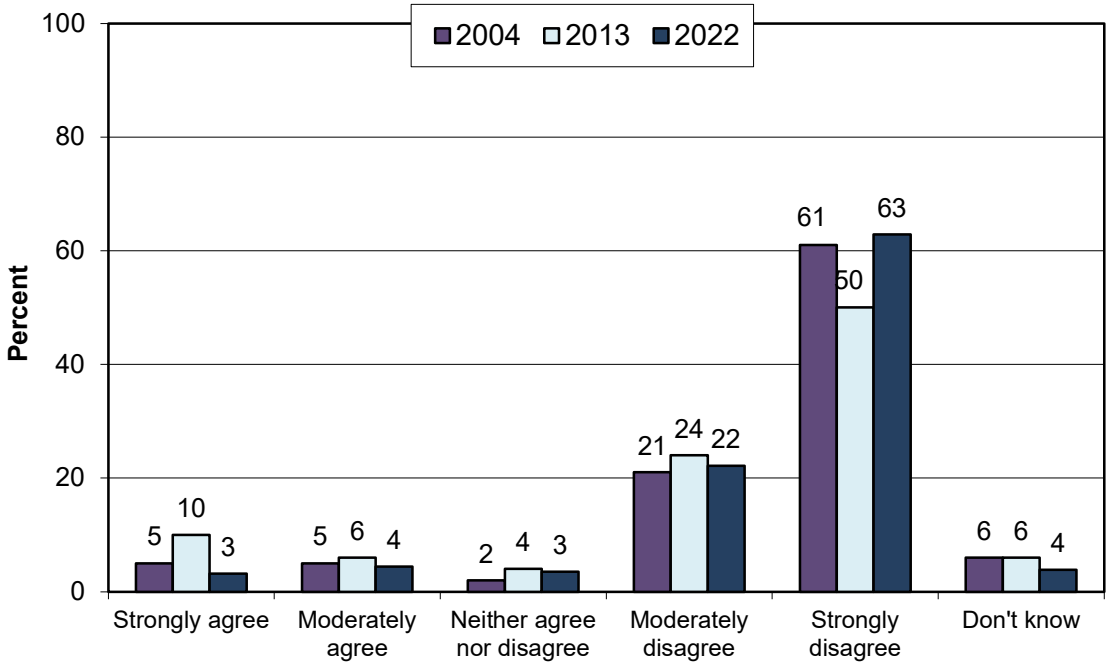
Black bears in Maryland are dangerous to humans. (Do you agree or disagree with this statement?)



Black bears will kill many livestock and pets in Maryland. (Do you agree or disagree with this statement?)

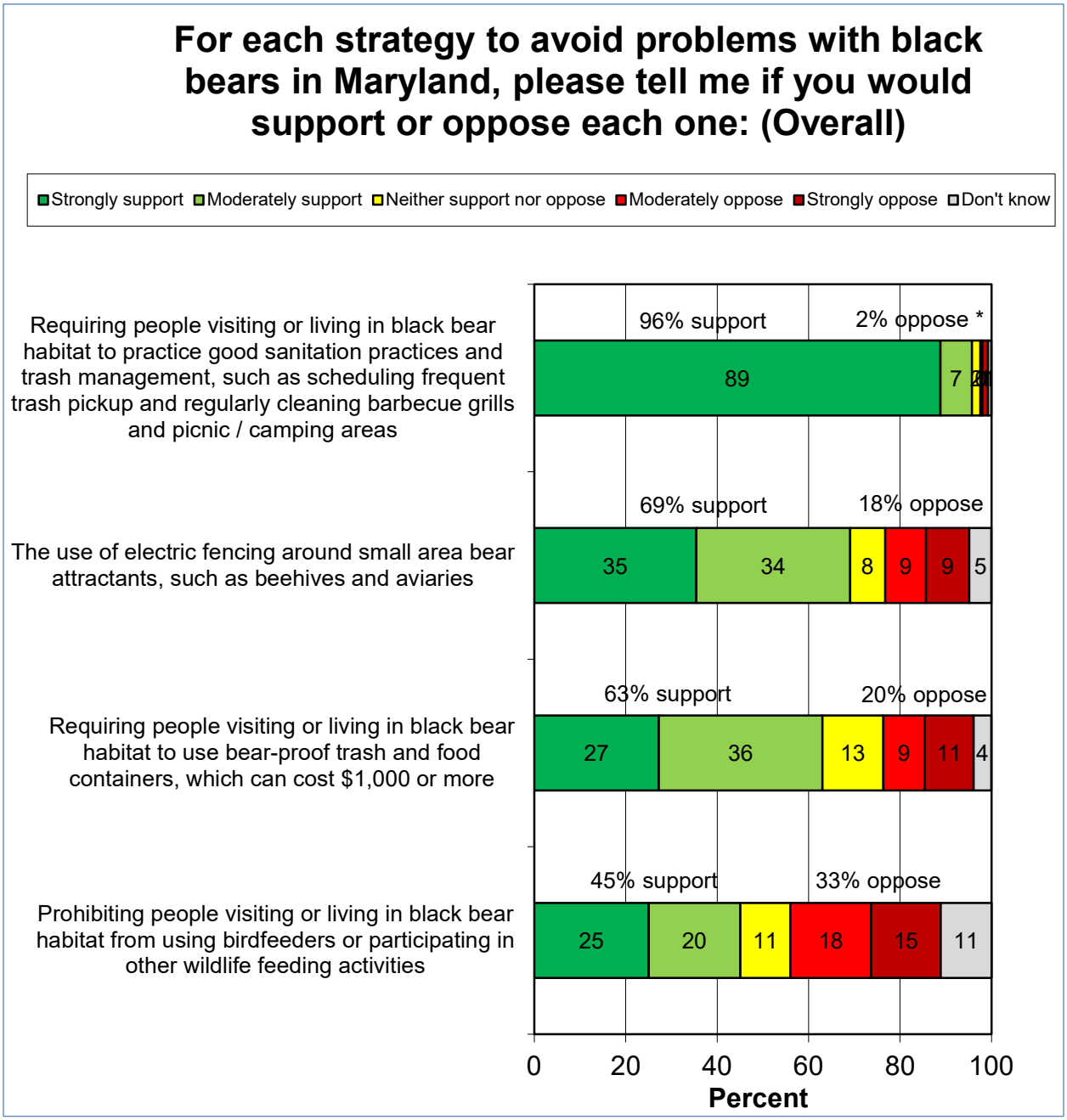


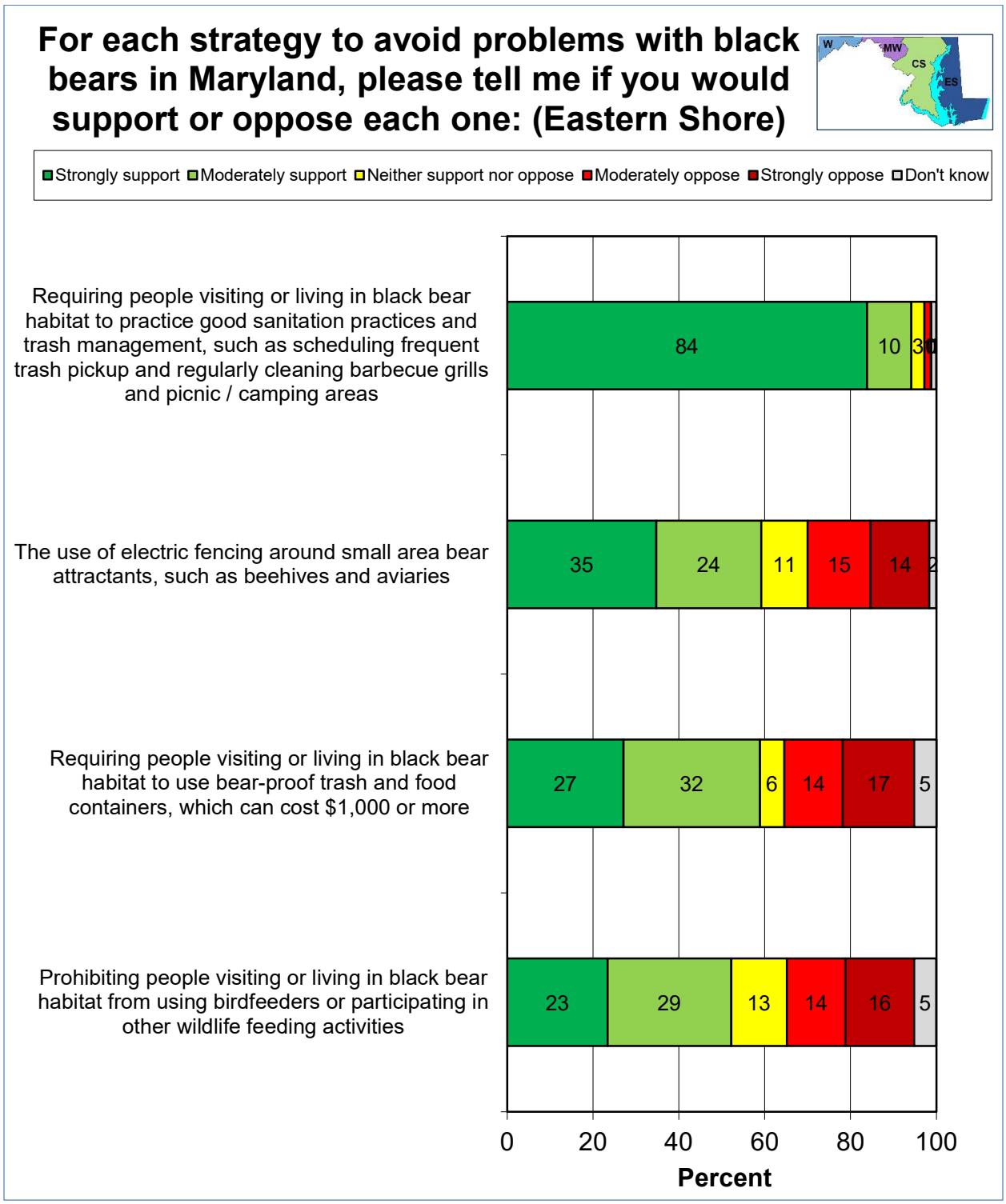
There is no need for black bears in Maryland. (Do you agree or disagree with this statement?)



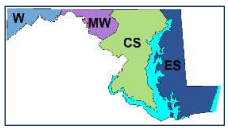
BEAR CONFLICT PRECAUTIONS AND MANAGEMENT STRATEGIES

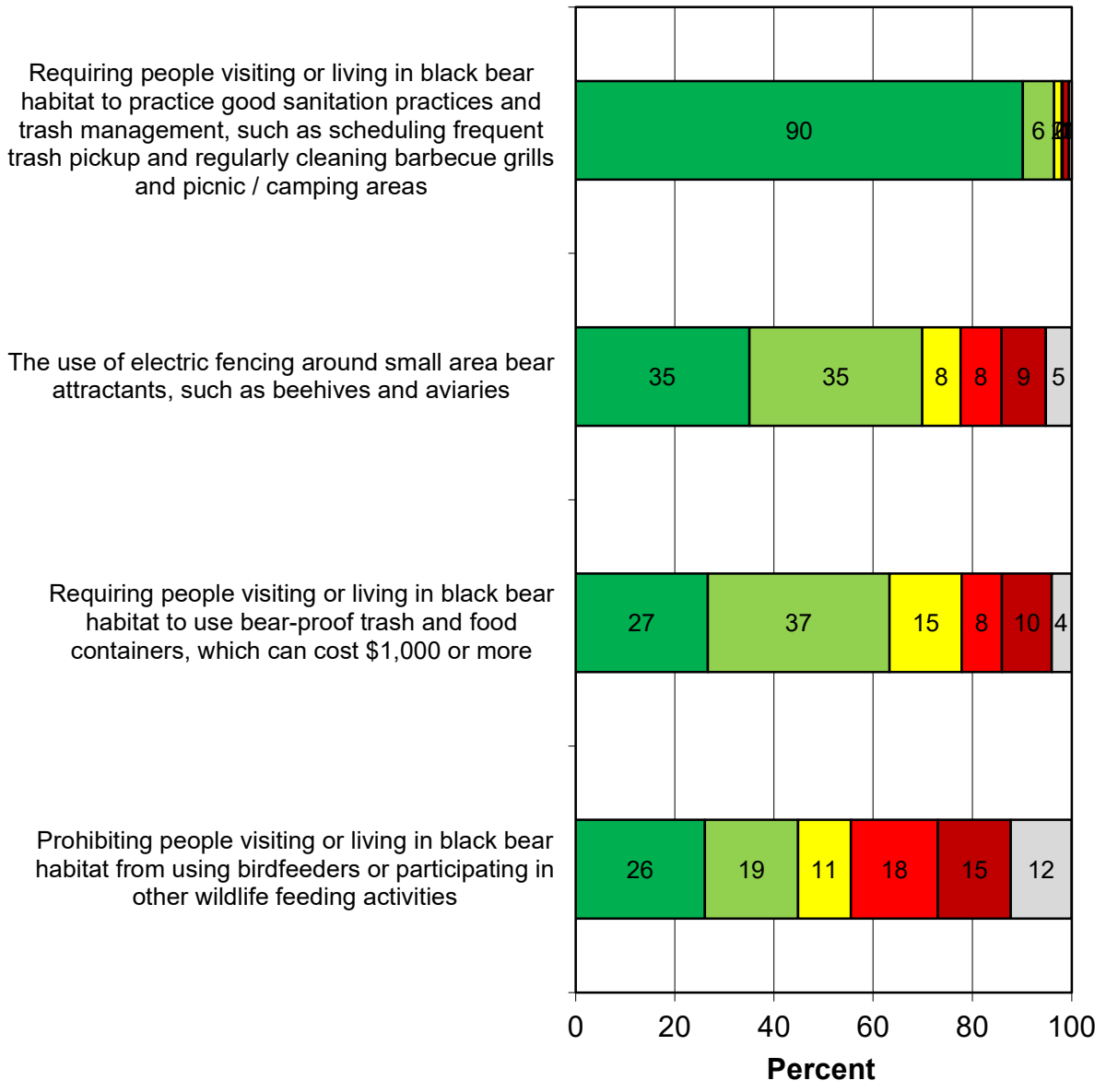
Residents were asked if they support or oppose four management strategies to avoid potential problems with bears. Nearly all residents (96%) support requiring people in bear habitat to practice good sanitation practices. This is followed by the use of electric fencing around bear attractants (69%) and requiring bear-proof trash and food containers (63%). Finally, 45% support and 33% oppose prohibiting birdfeeders or wildlife feeding in bear habitat. Regional results and trend analyses follow the overall results.



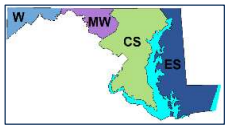

For each strategy to avoid problems with black bears in Maryland, please tell me if you would support or oppose each one: (Eastern Shore)
W
MW
CS
ES
Strongly support
Moderately support
Neither support nor oppose
Moderately oppose
Strongly oppose
Don't know
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas
84
10
3
The use of electric fencing around small area bear attractants, such as beehives and aviaries
35
24
11
15
14
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more
27
32
6
14
17
5
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities
23
29
13
14
16
5
0
20
40
60
80
100
Percent

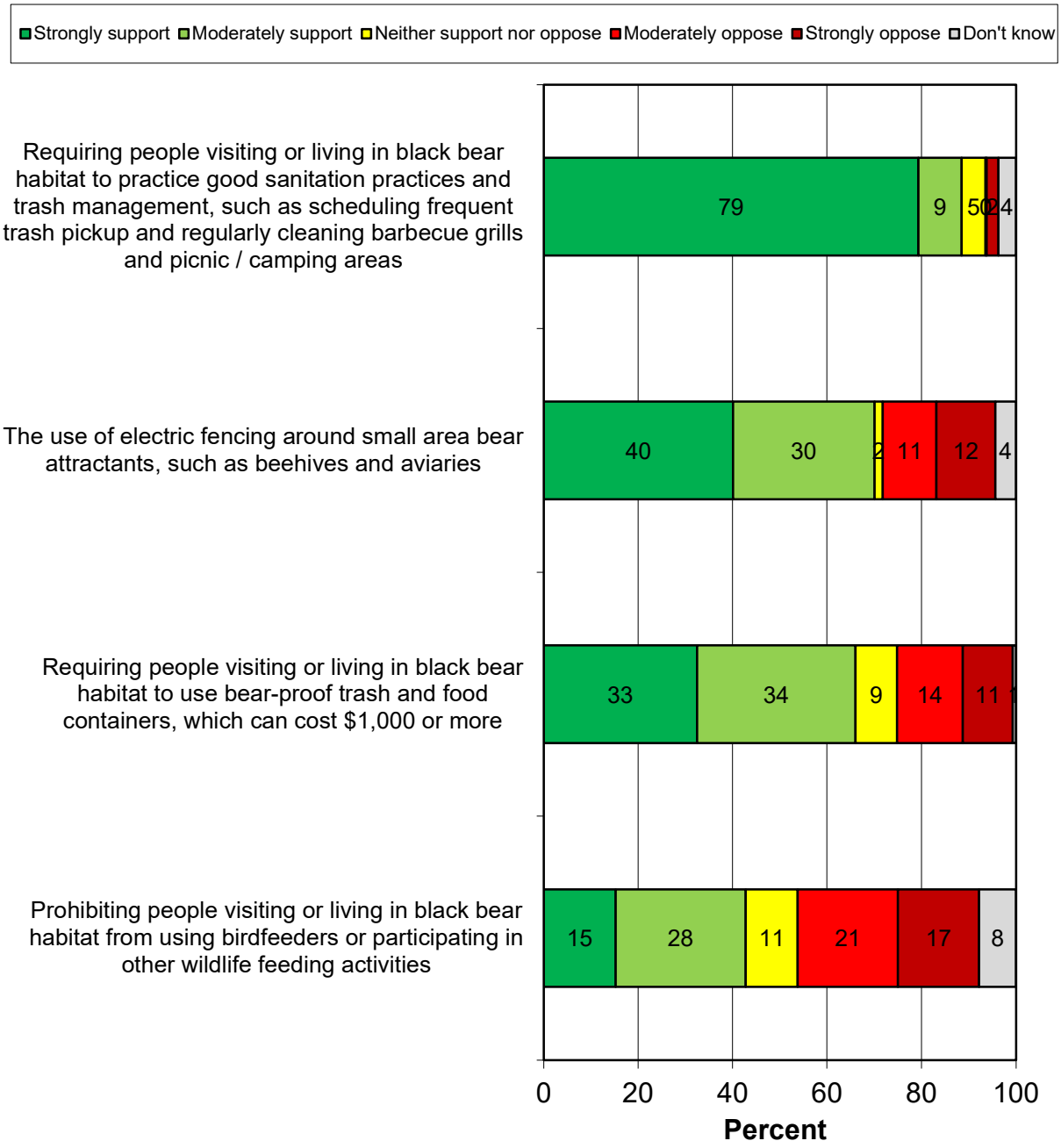
For each strategy to avoid problems with black bears in Maryland, please tell me if you would support or oppose each one: (Central / Southern)



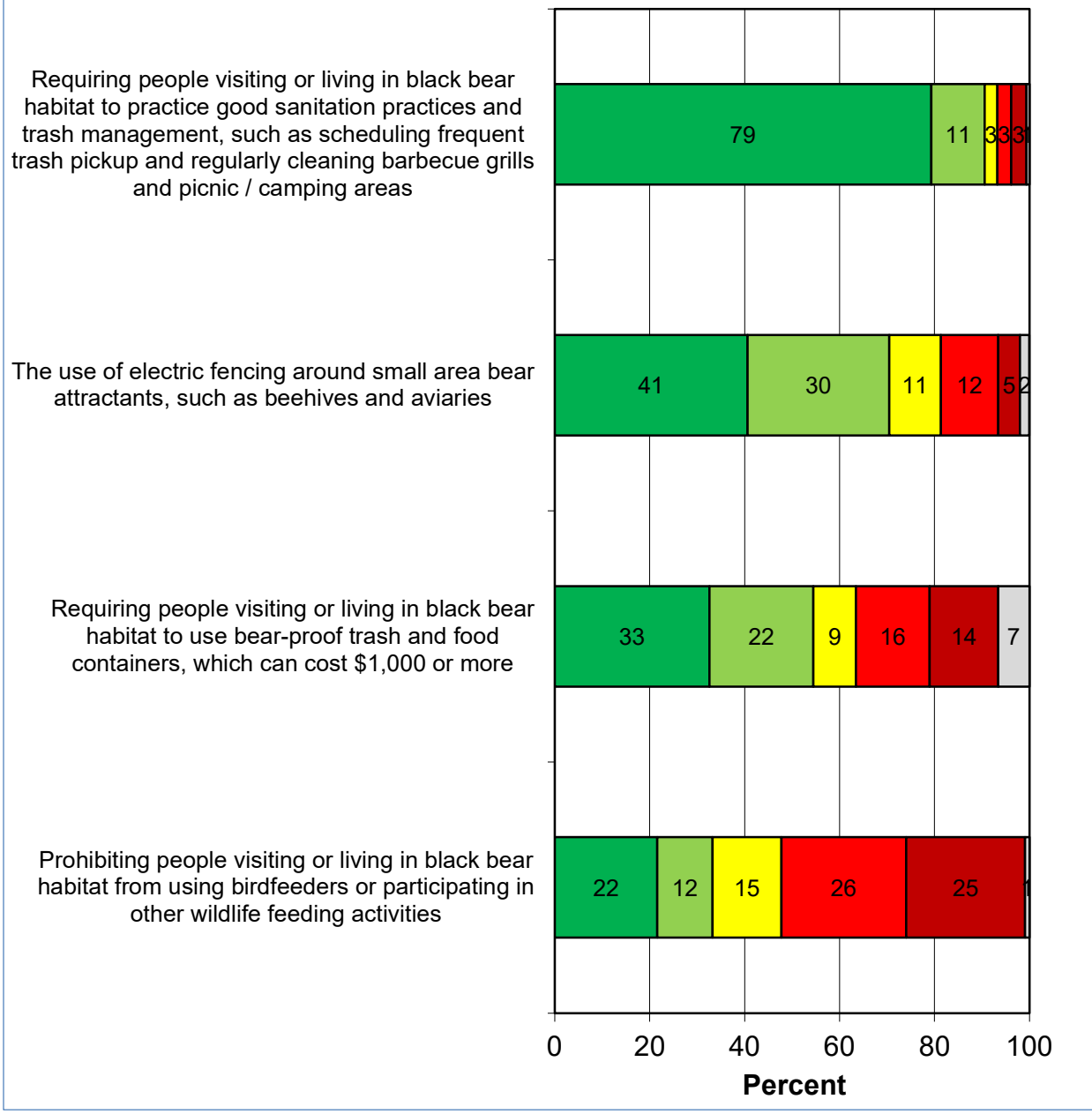


For each strategy to avoid problems with black bears in Maryland, please tell me if you would support or oppose each one: (Mid-Western)

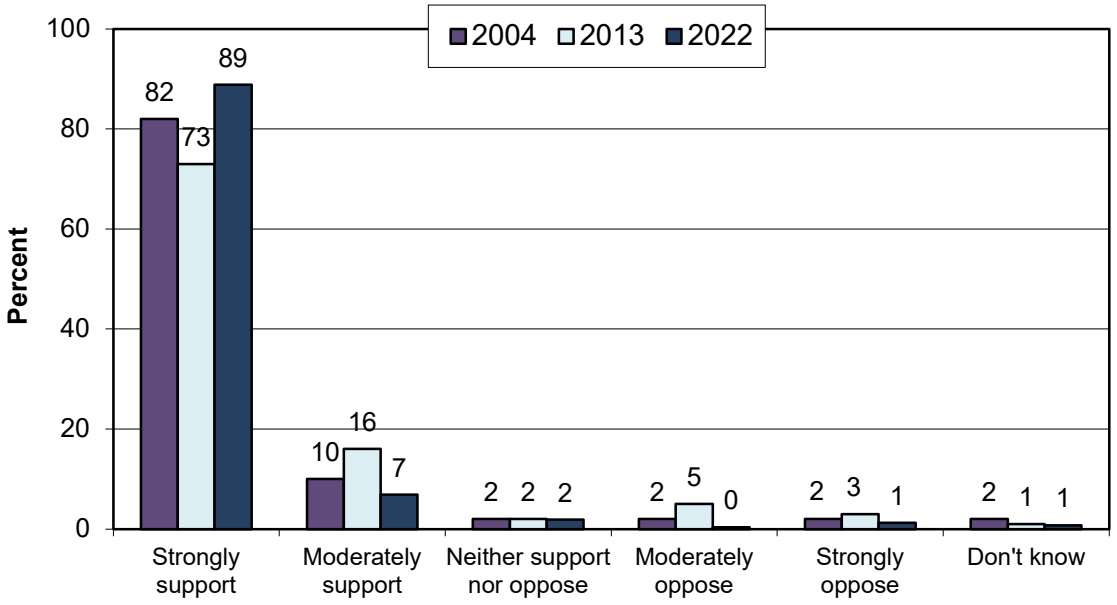




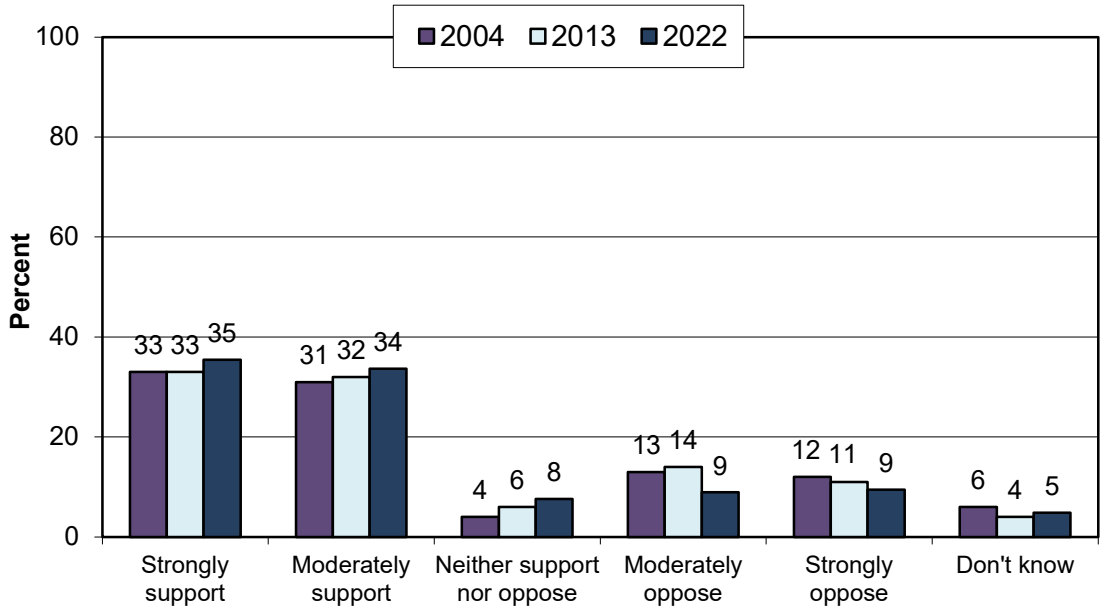
For each strategy to avoid problems with black bears in Maryland, please tell me if you would support or oppose each one: (Western)



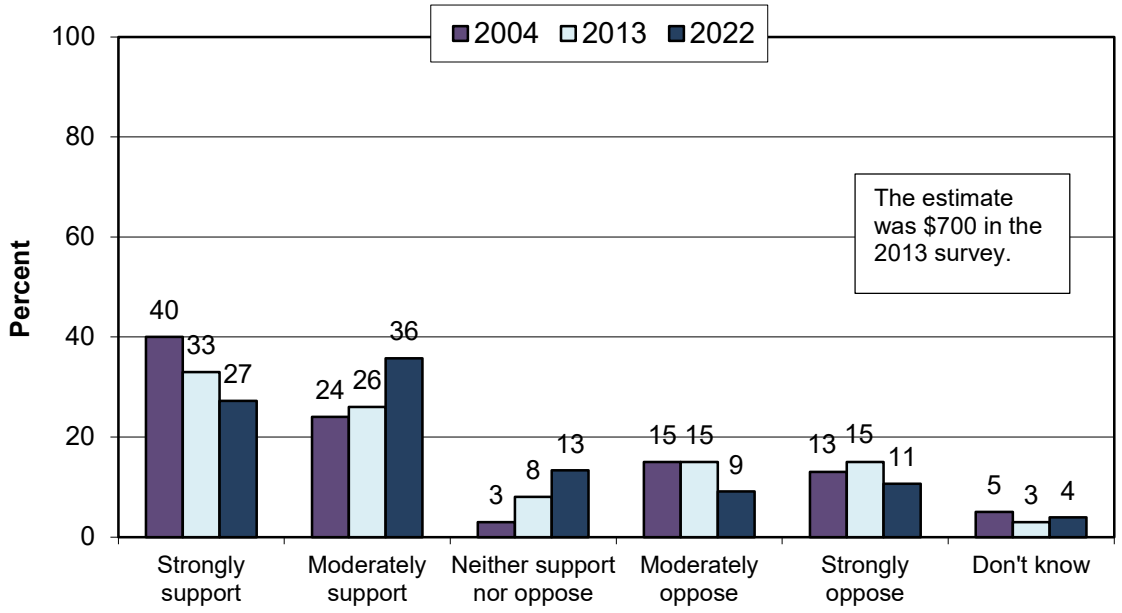
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas. (Would you support or oppose this?)



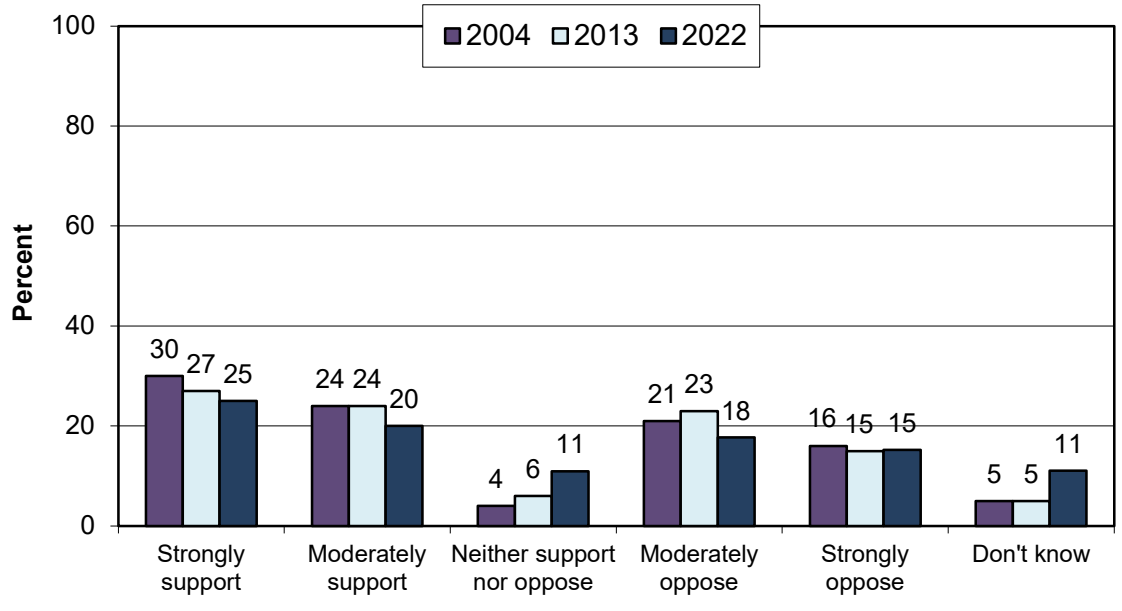
The use of electric fencing around small area bear attractants, such as beehives and aviaries. (Would you support or oppose this?)



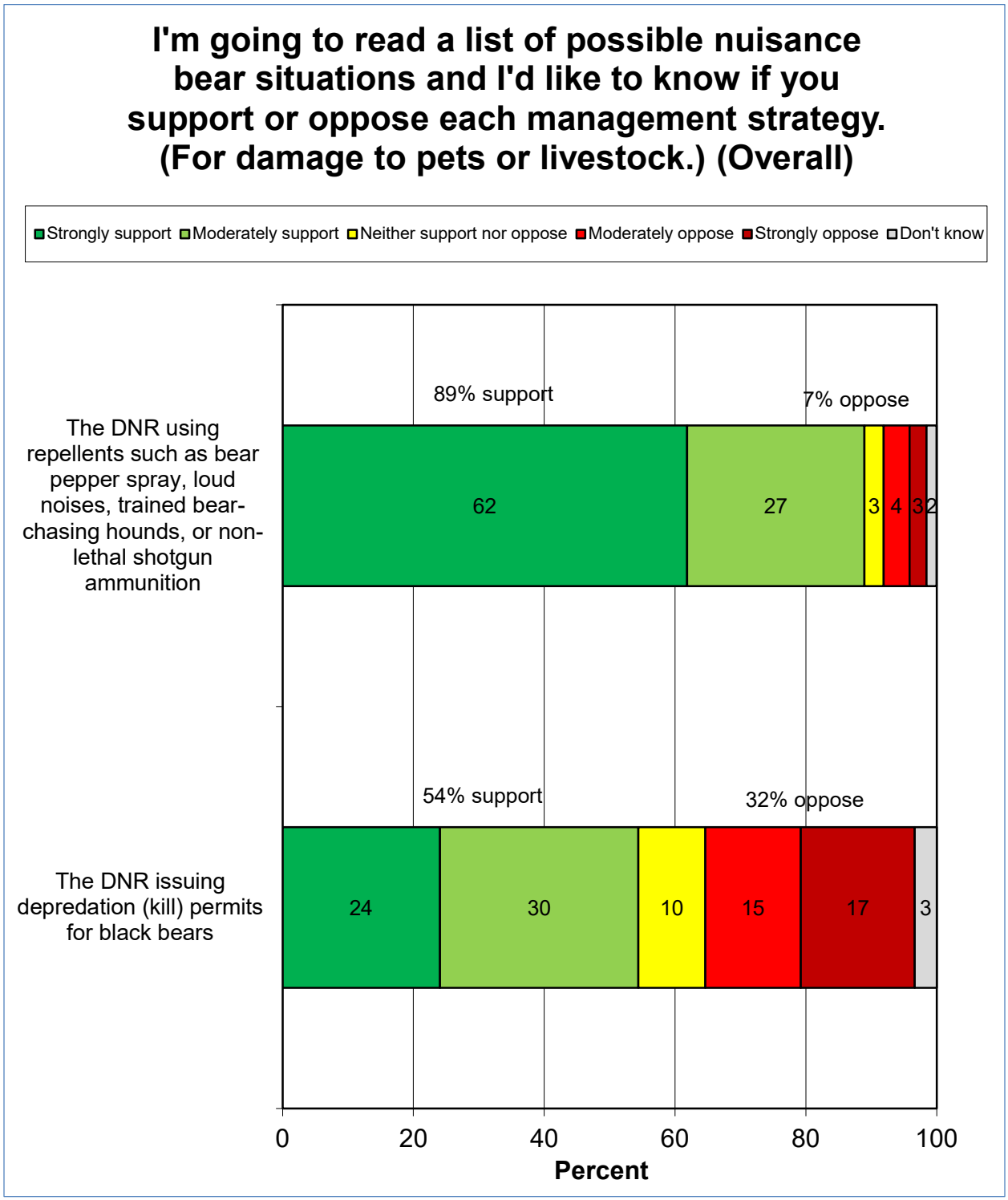
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more. (Would you support or oppose this?)



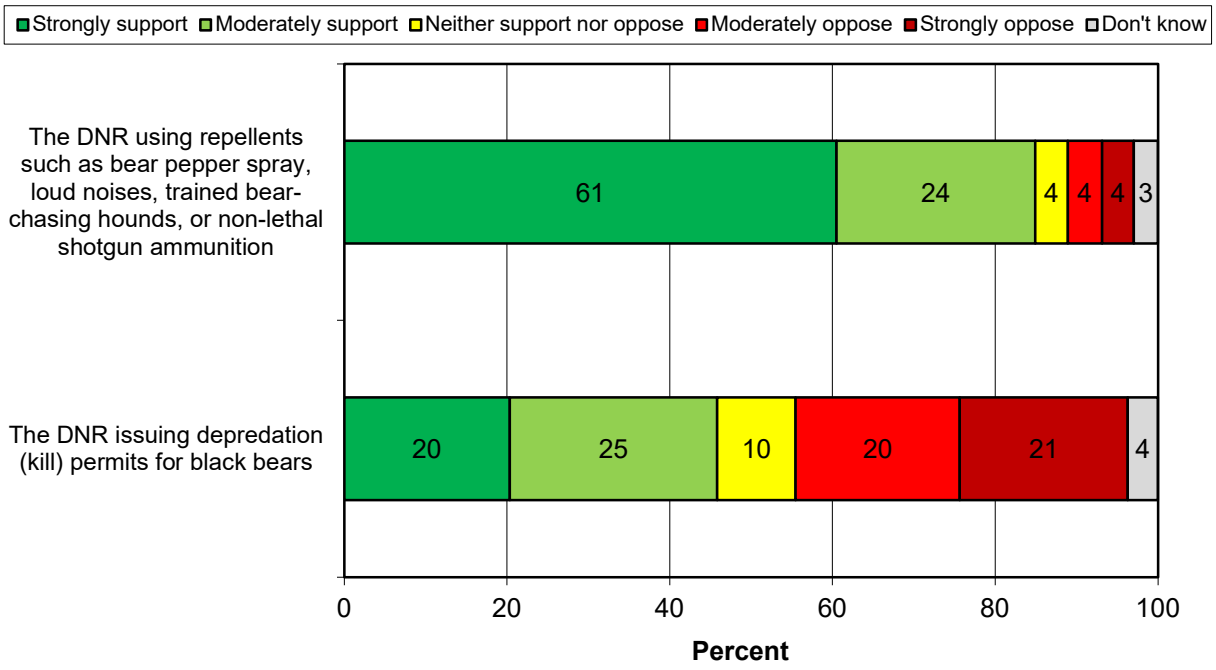
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities. (Would you support or oppose this?)



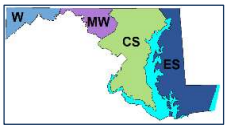
The survey addressed management strategies for specific types of potential bear problems. First, two strategies were considered to prevent damage to pets or livestock. Most residents (89%) support the DNR using repellents (such as bear pepper spray, loud noises, trained dogs, and non-lethal shotgun ammunition). Regarding the DNR issuing depredation (kill) permits, however, the result is more divided: 54% support, but 32% oppose. Regional results and trend analyses are also shown.

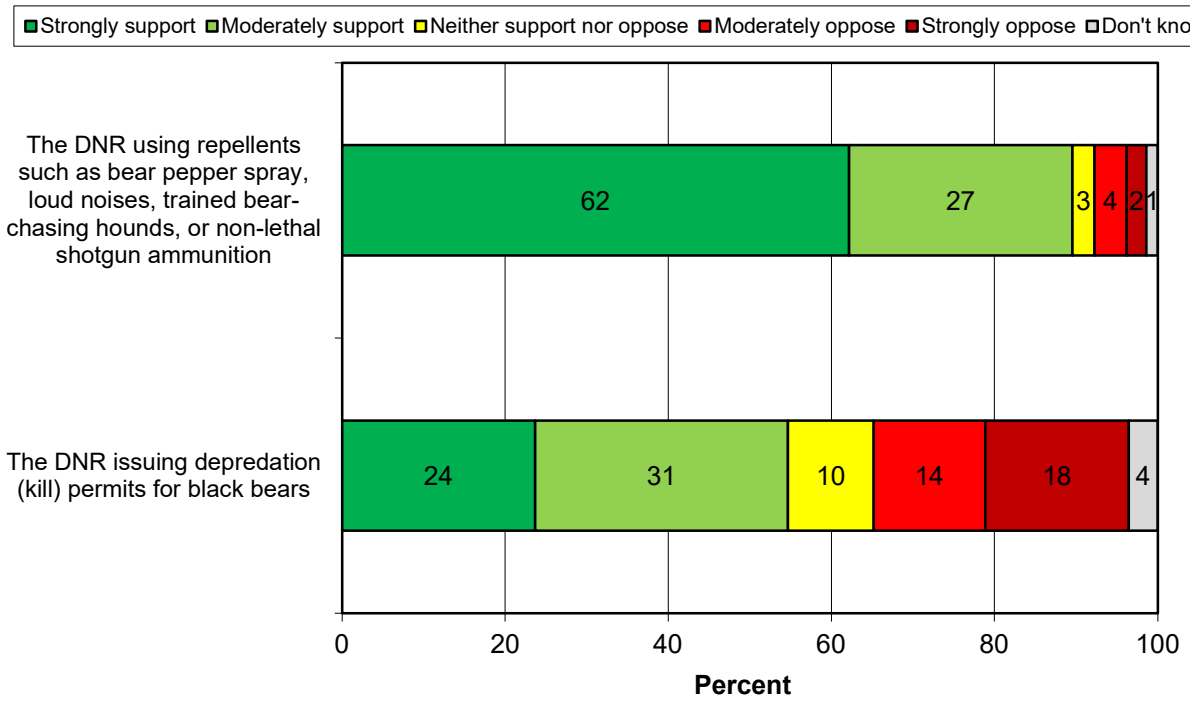


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to pets or livestock.) (Eastern Shore)

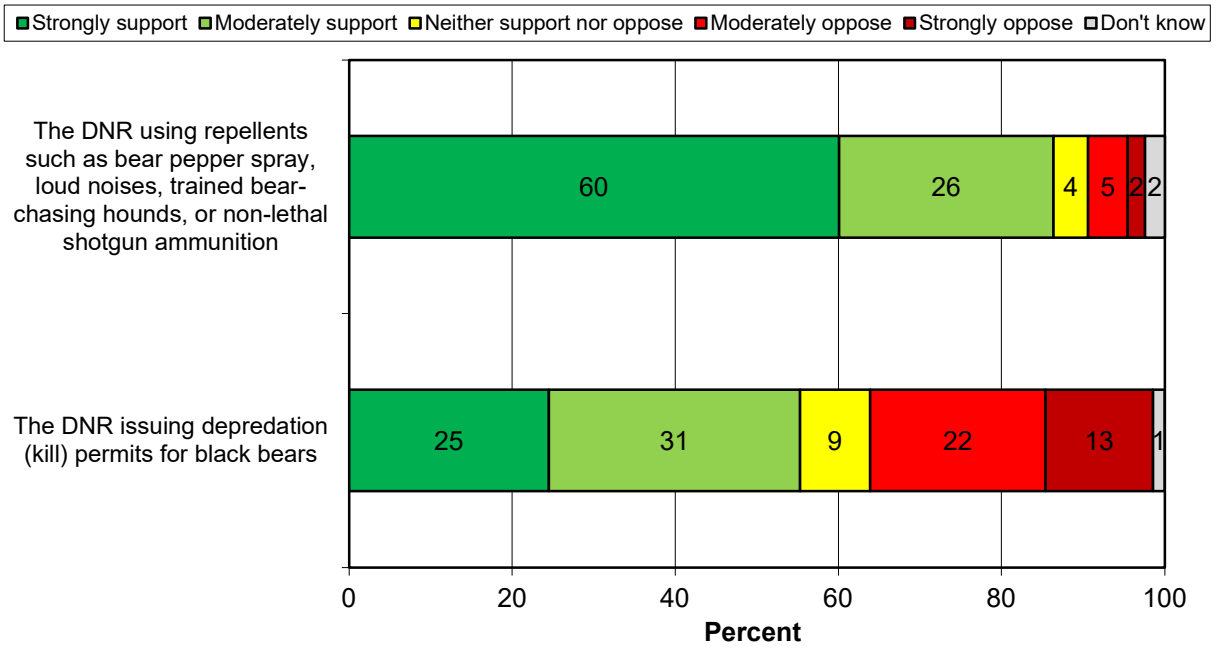


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to pets or livestock.) (Central / Southern)

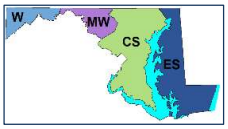


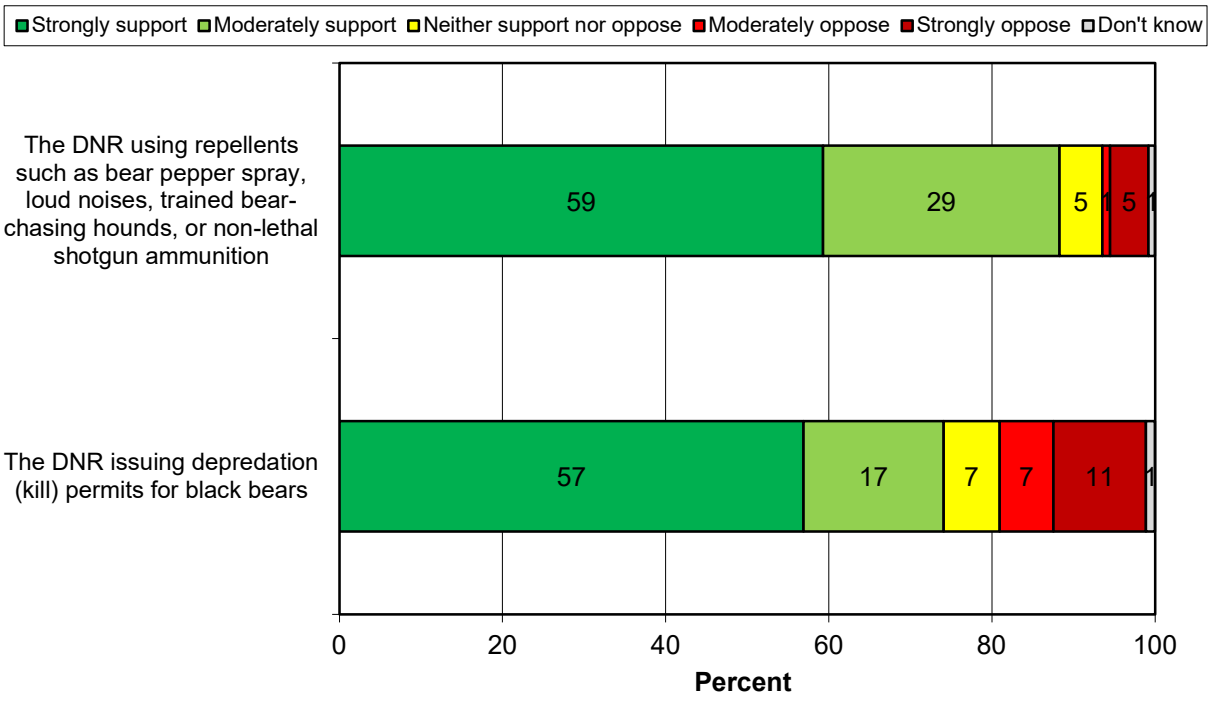


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to pets or livestock.) (Mid-Western)

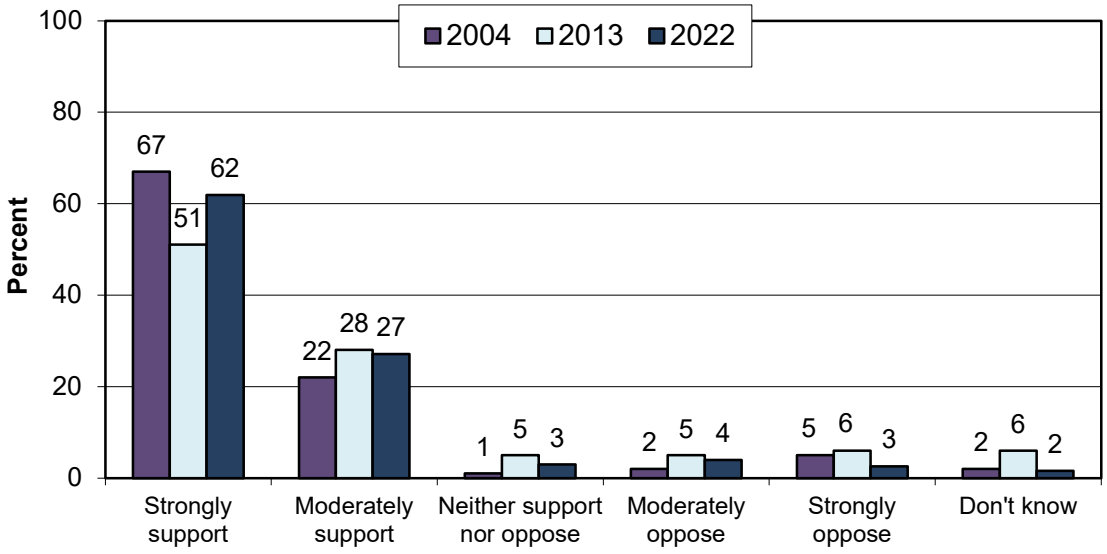


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to pets or livestock.) (Western)

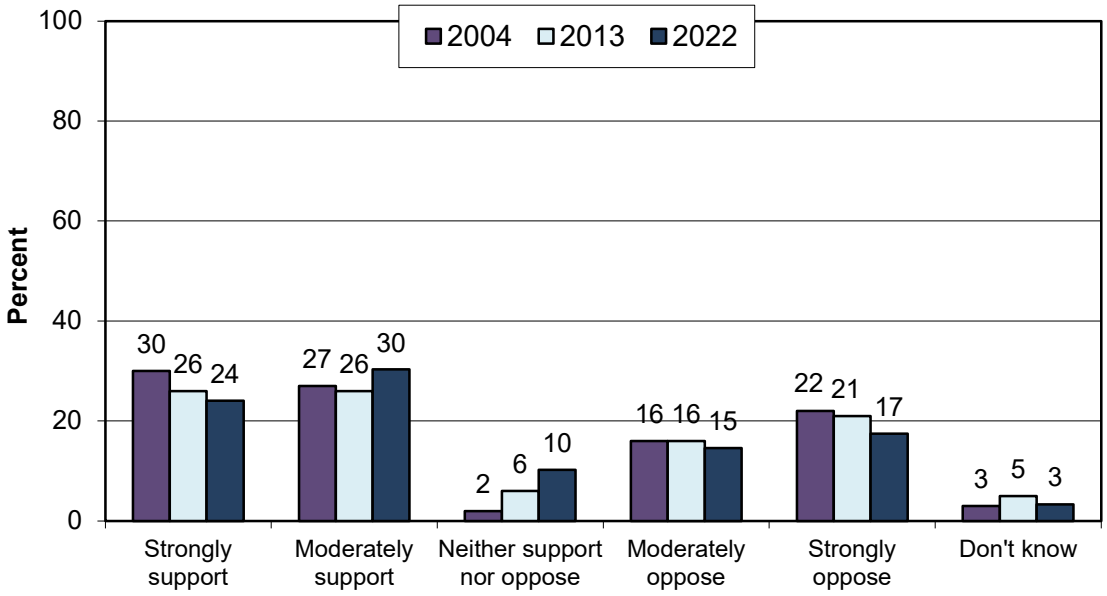




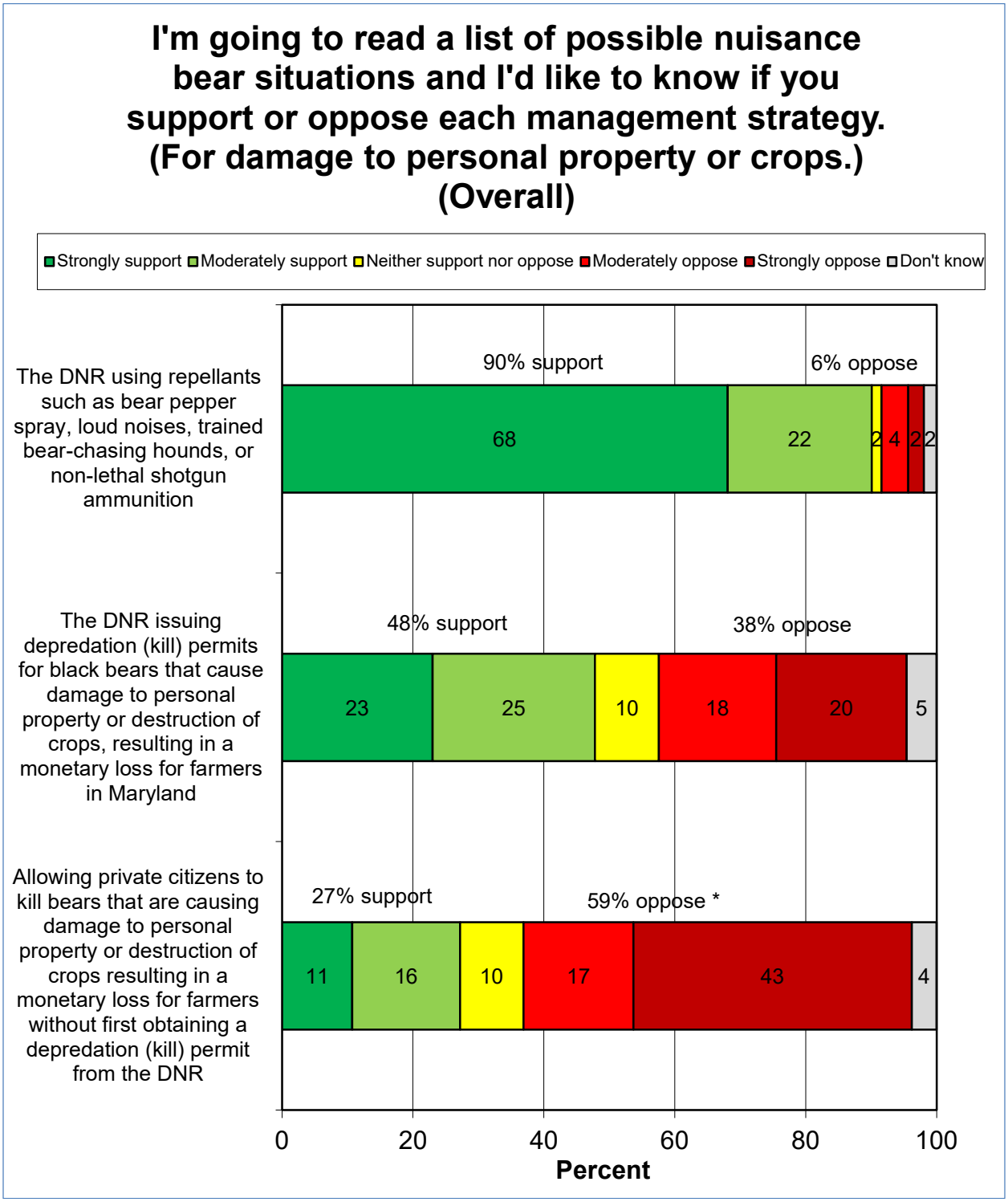
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



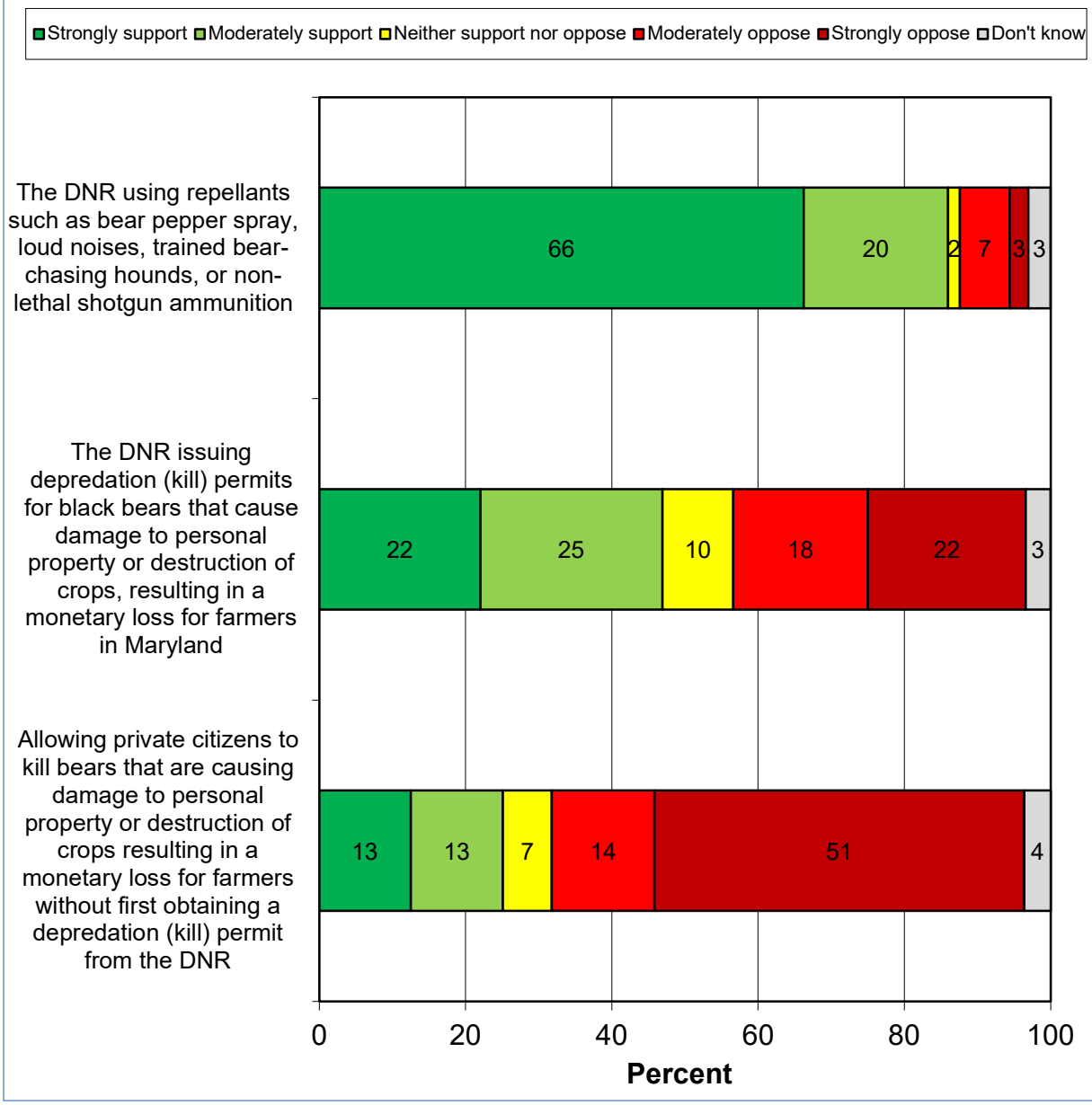
The DNR issuing depredation (kill) permits for black bears. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



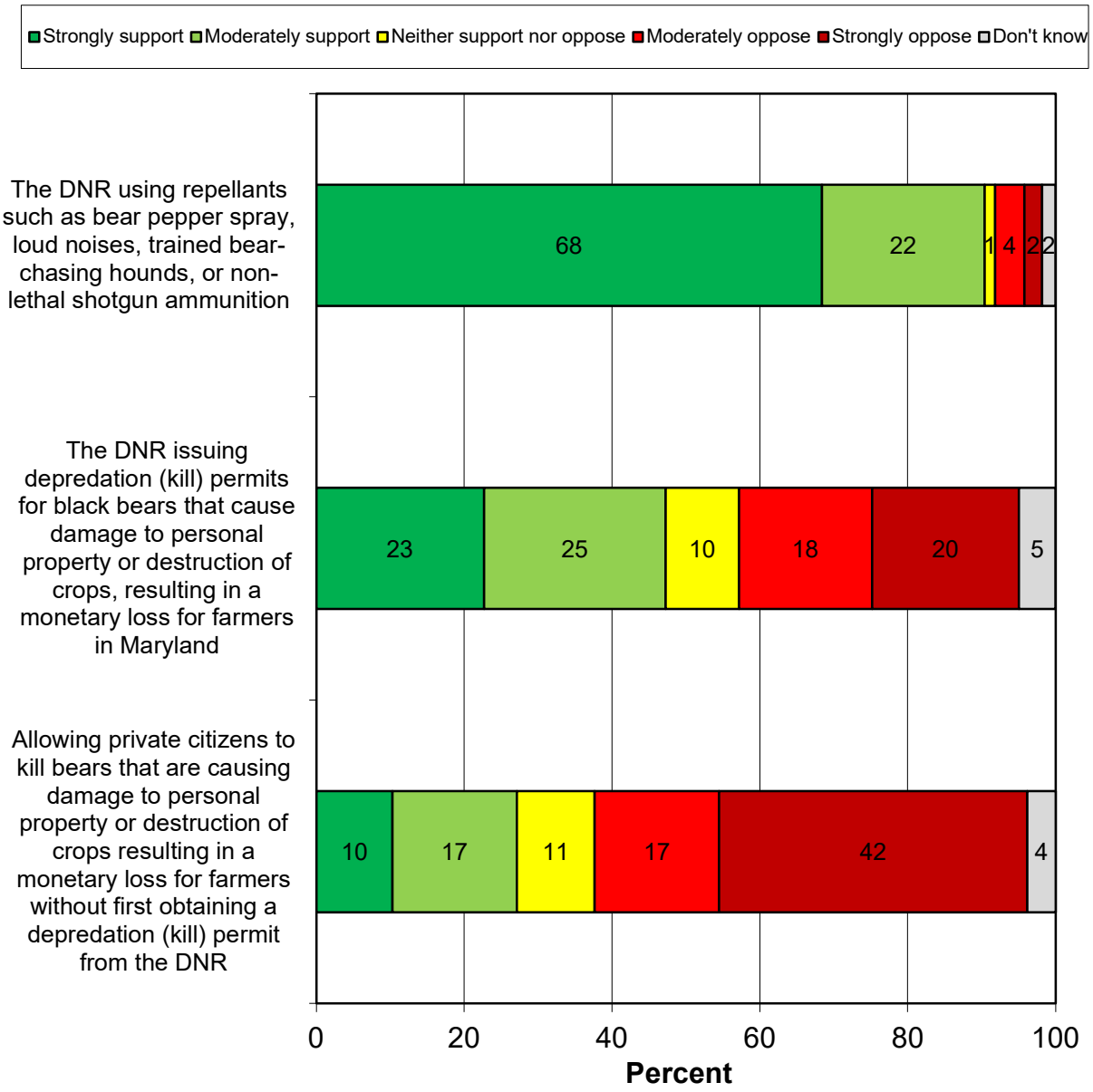
Next, three strategies were considered to prevent damage to personal property or crops. Again, there was overwhelming support (90%) for the DNR using repellents, while 48% support and 38% oppose the DNR issuing depredation permits. The third strategy, allowing private citizens to kill bears without a depredation permit, had much more opposition (59%) than support (27%). Regional results and trend analyses follow the overall results.



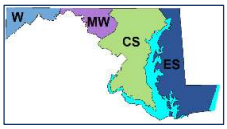
I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to personal property or crops.) (Eastern Shore)

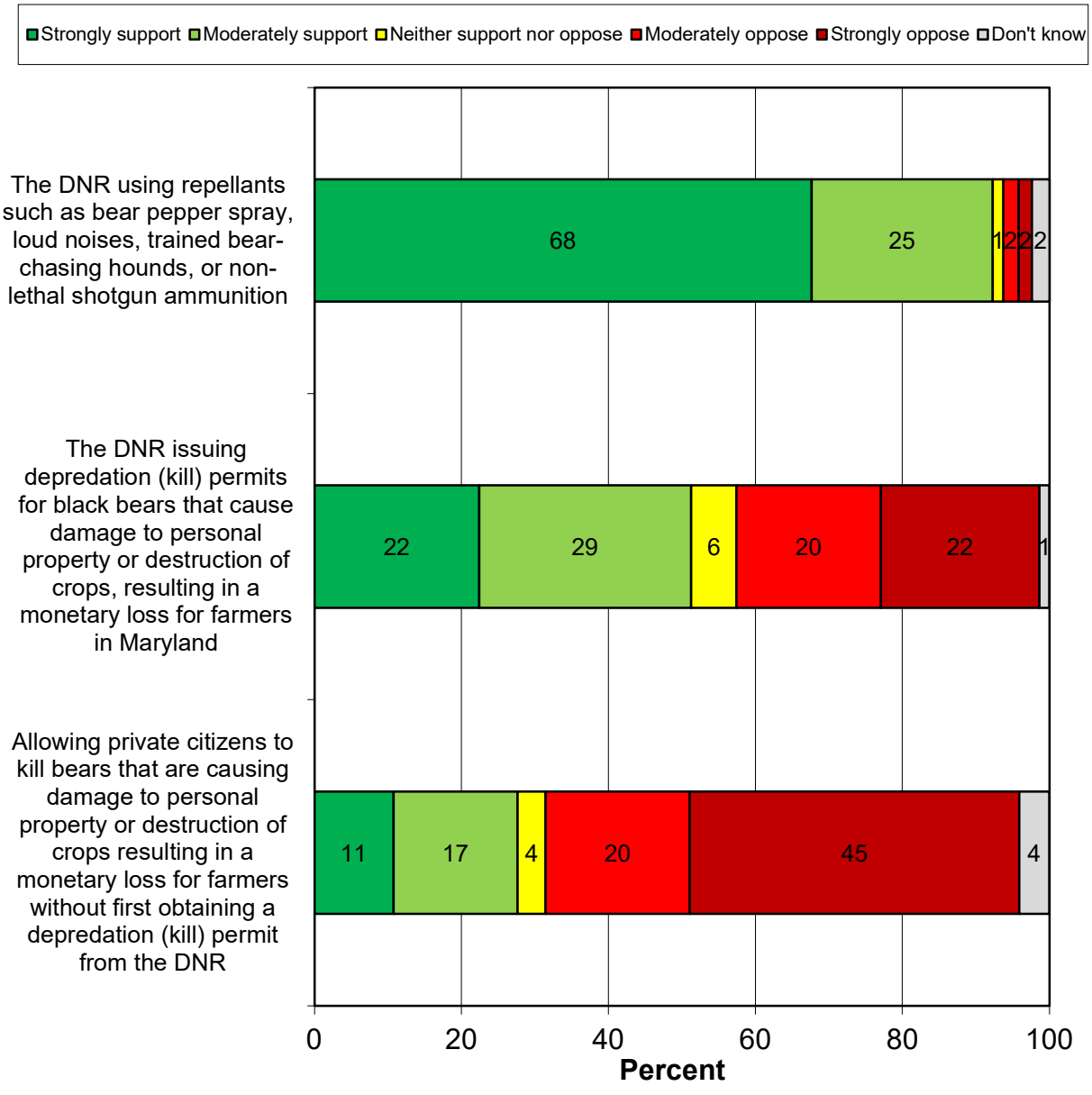


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to personal property or crops.) (Central / Southern)

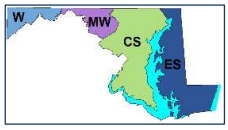


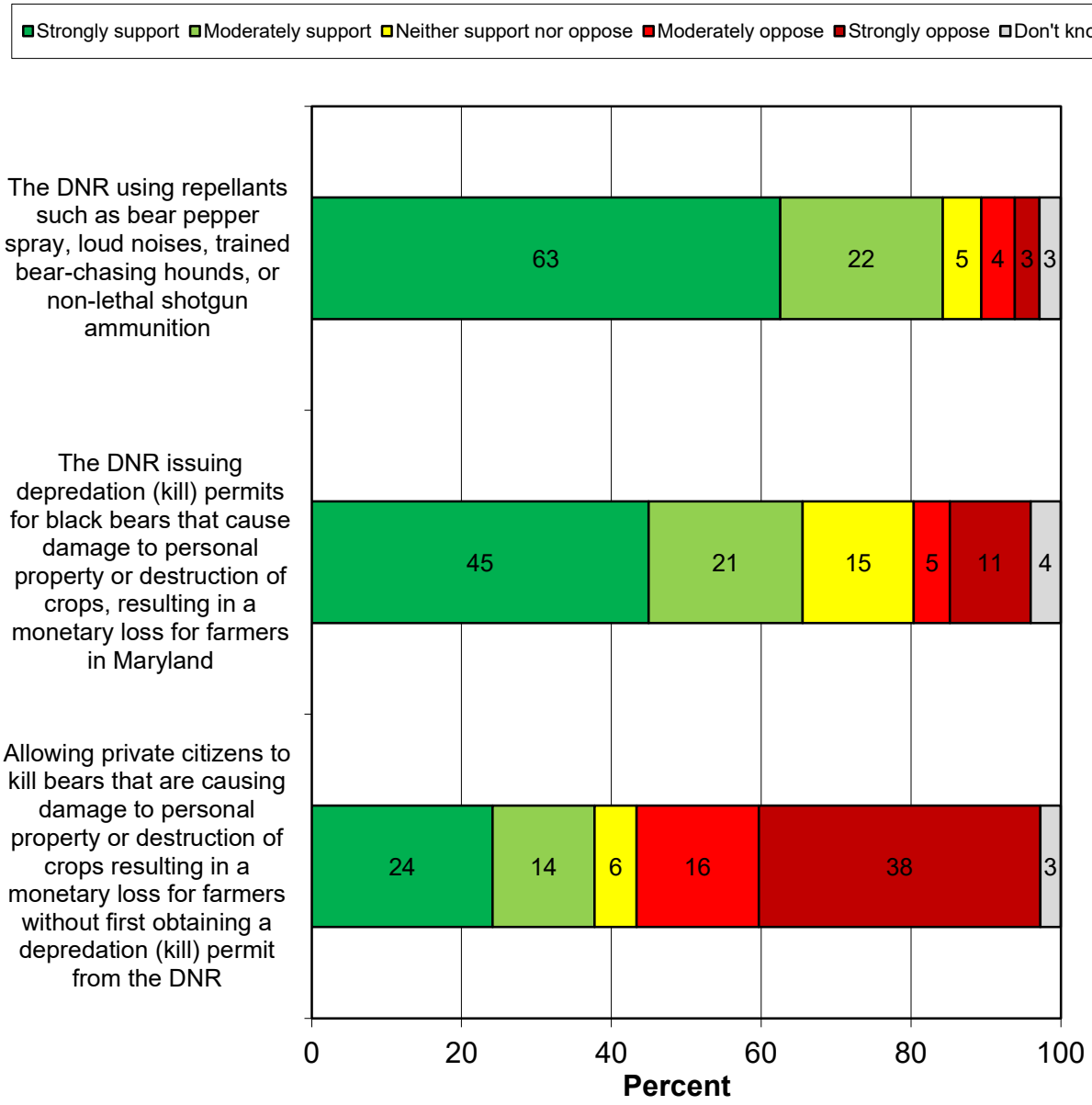
I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to personal property or crops.) (Mid-Western)



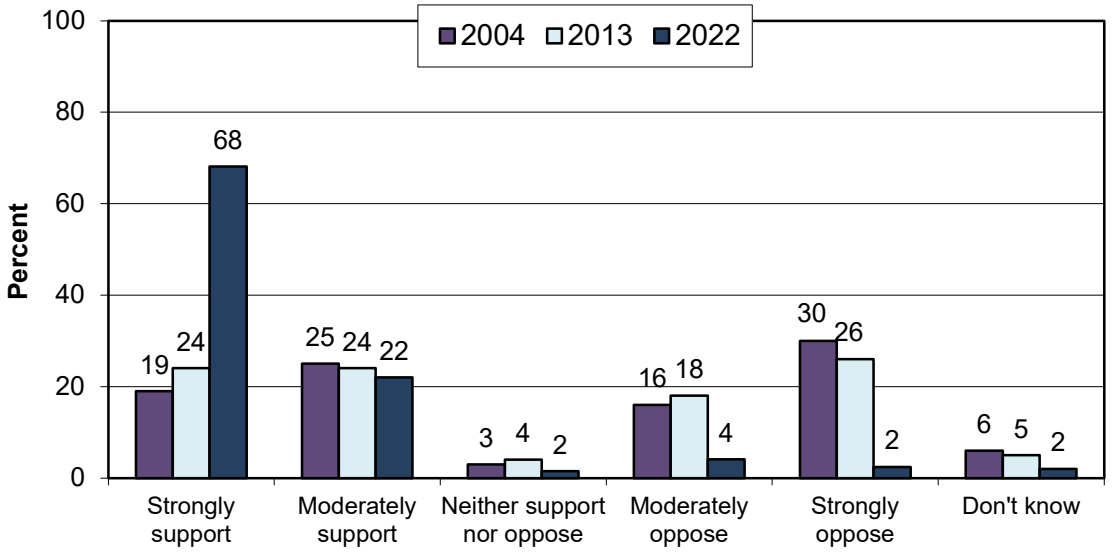


I'm going to read a list of possible nuisance bear situations and I'd like to know if you support or oppose each management strategy. (For damage to personal property or crops.) (Western)

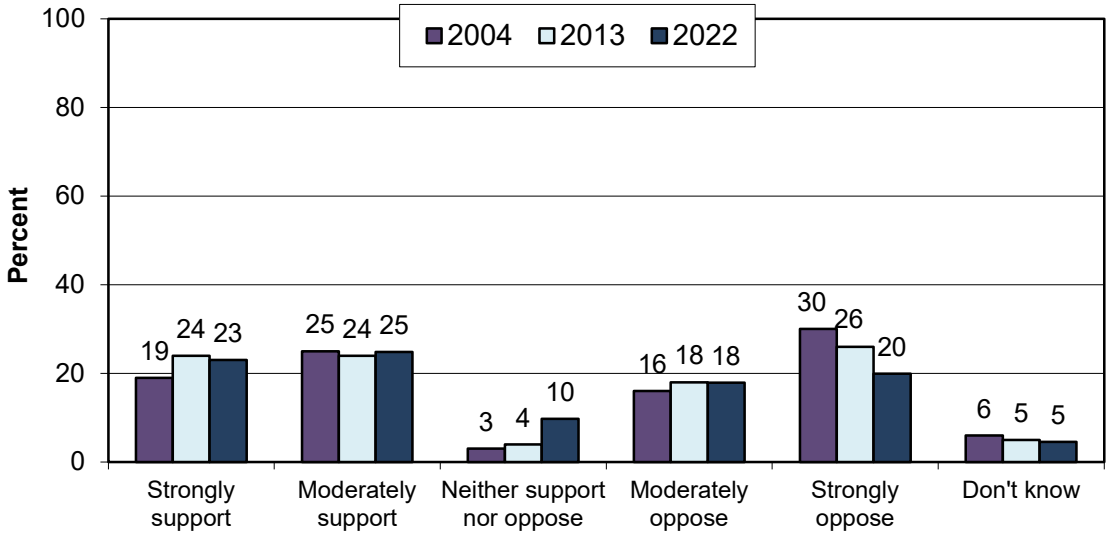




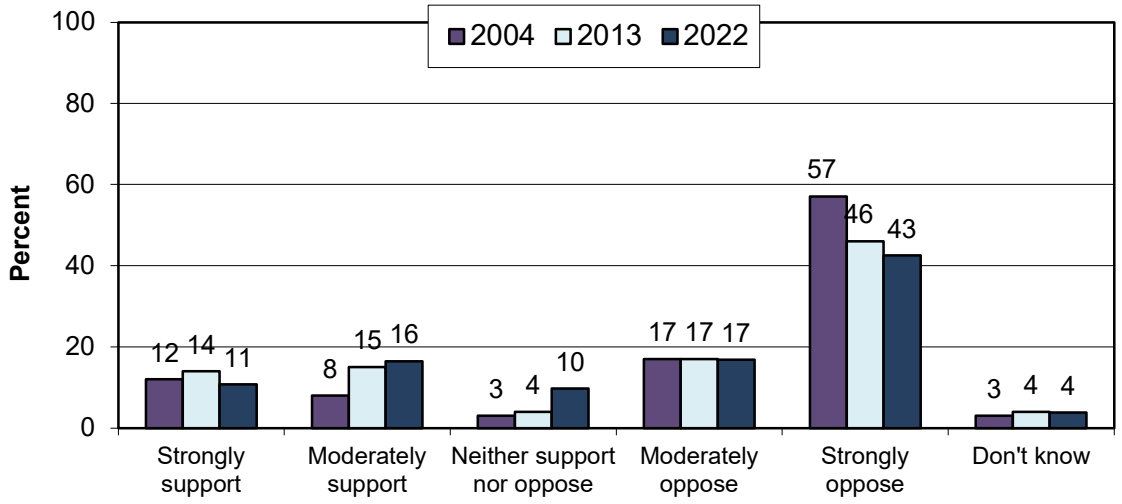
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)



The DNR issuing depredation (kill) permits for black bears that cause damage to personal property or destruction of crops, resulting in a monetary loss for farmers in Maryland. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)

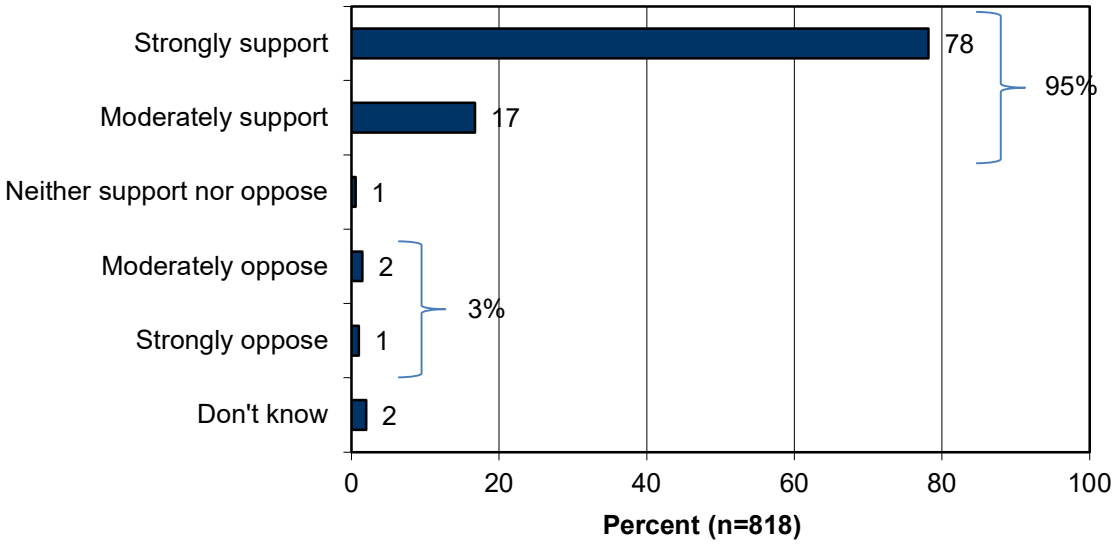


Allowing private citizens to kill bears that are causing damage to personal property or destruction of crops resulting in a monetary loss for farmers without first obtaining a depredation (kill) permit from the DNR. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)

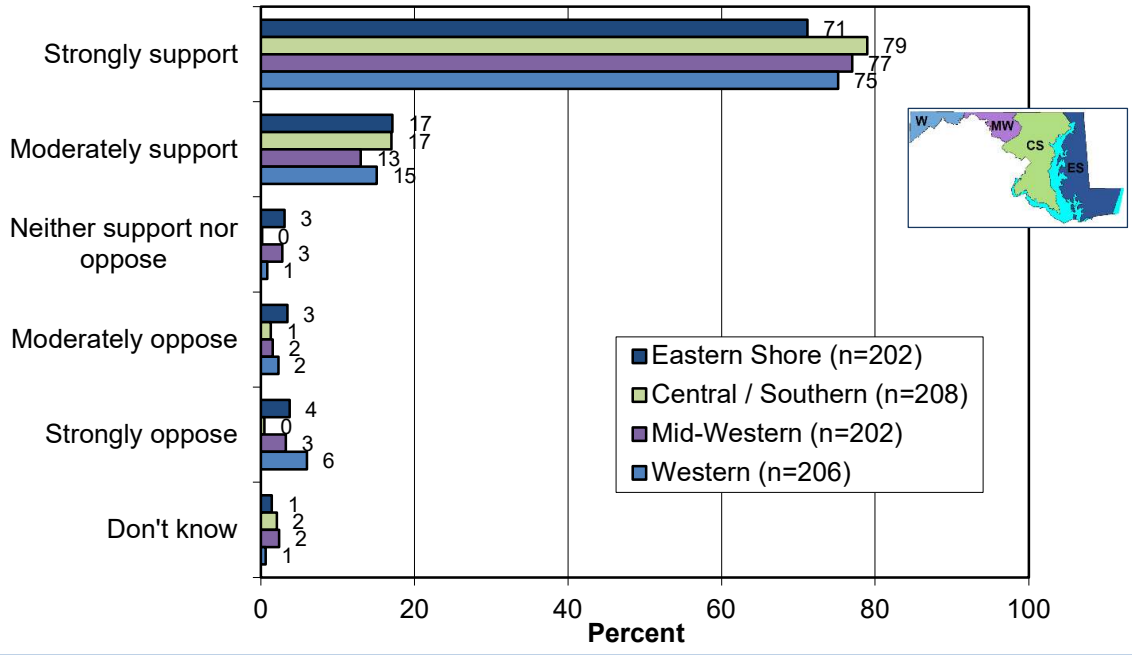


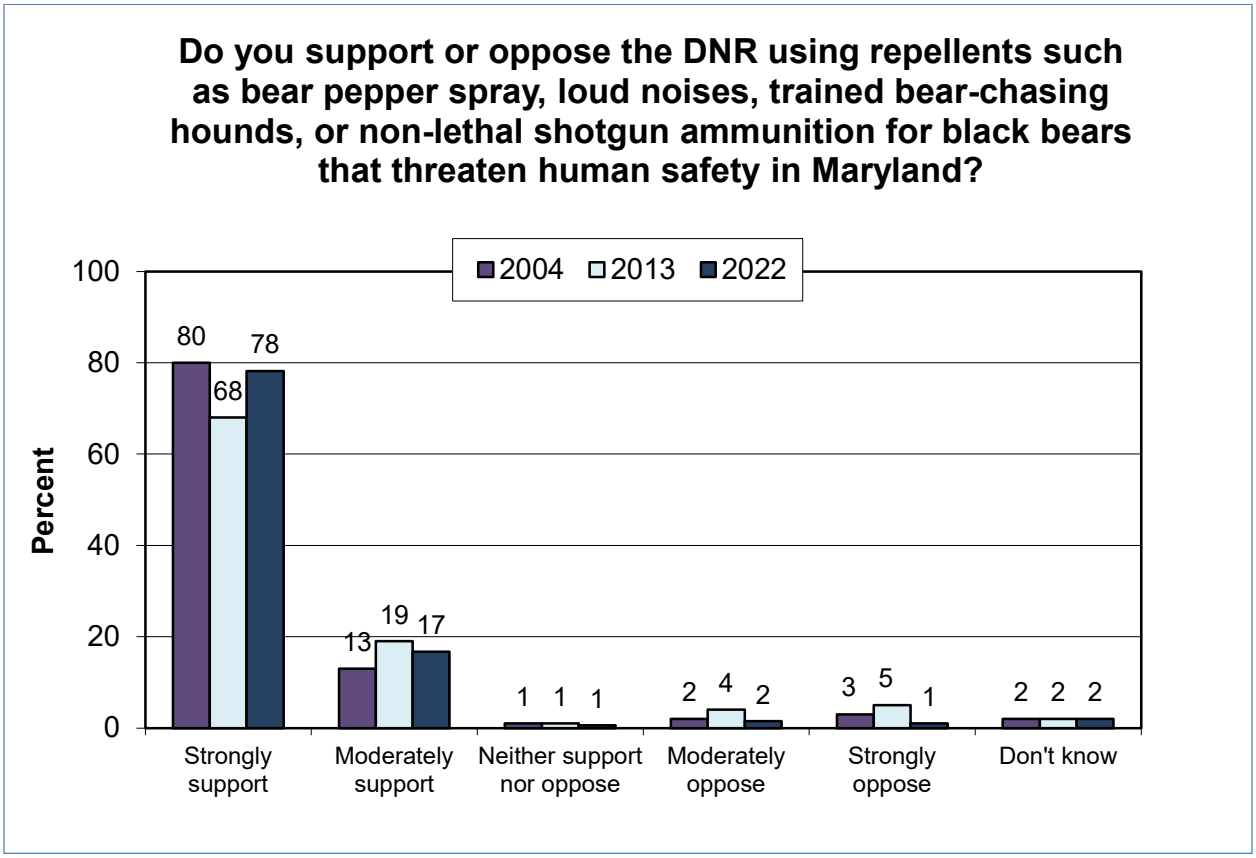
Finally, there was nearly unanimous support for the DNR using repellents to protect human safety (95% support this).

The final nuisance bear situation is threatening human safety. Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition?

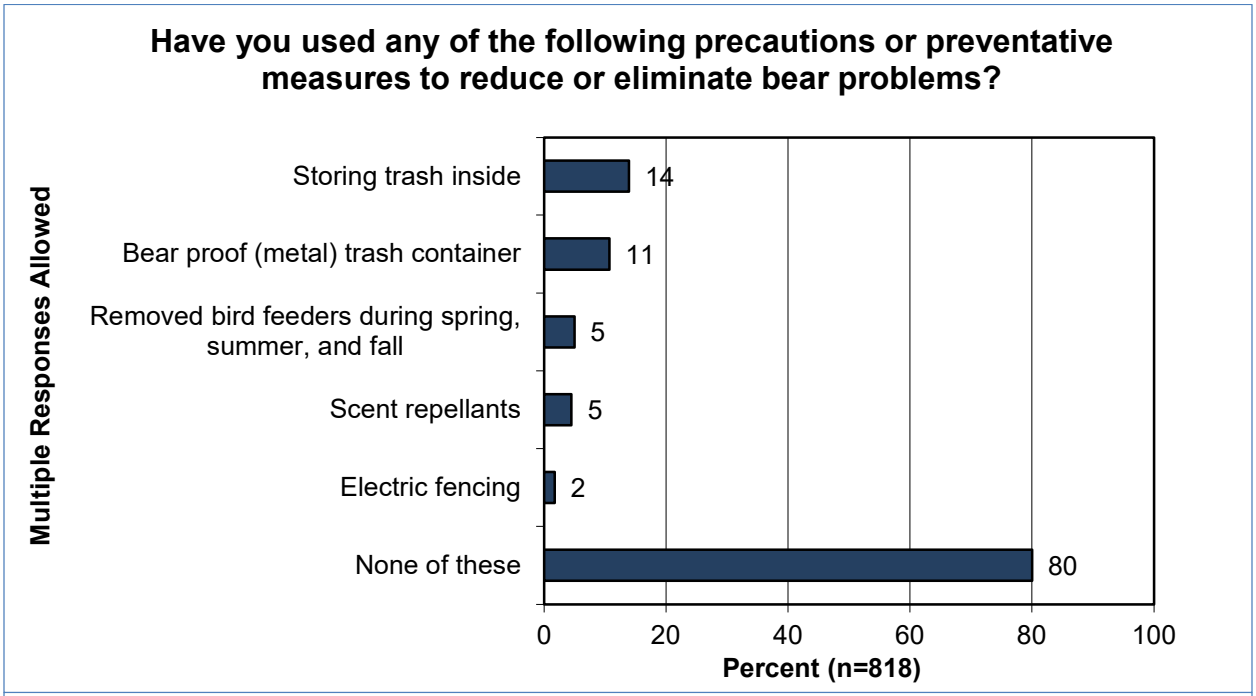


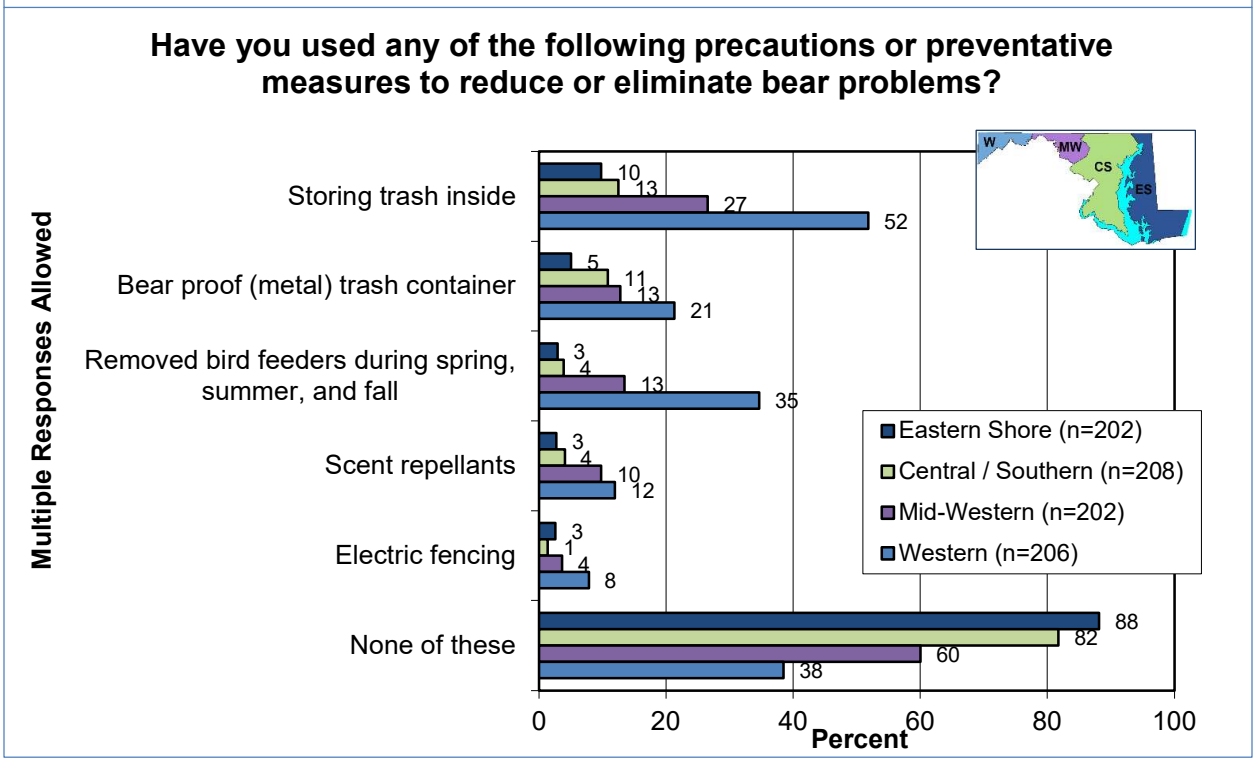
The final nuisance bear situation is threatening human safety. Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition?




Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition for black bears that threaten human safety in Maryland?
2004
2013
2022
Percent
100
80
60
40
20
0
80
68
78
13
19
17
1
1
1
2
4
2
3
5
1
2
2
2
Strongly support
Moderately support
Neither support nor oppose
Moderately oppose
Strongly oppose
Don't know

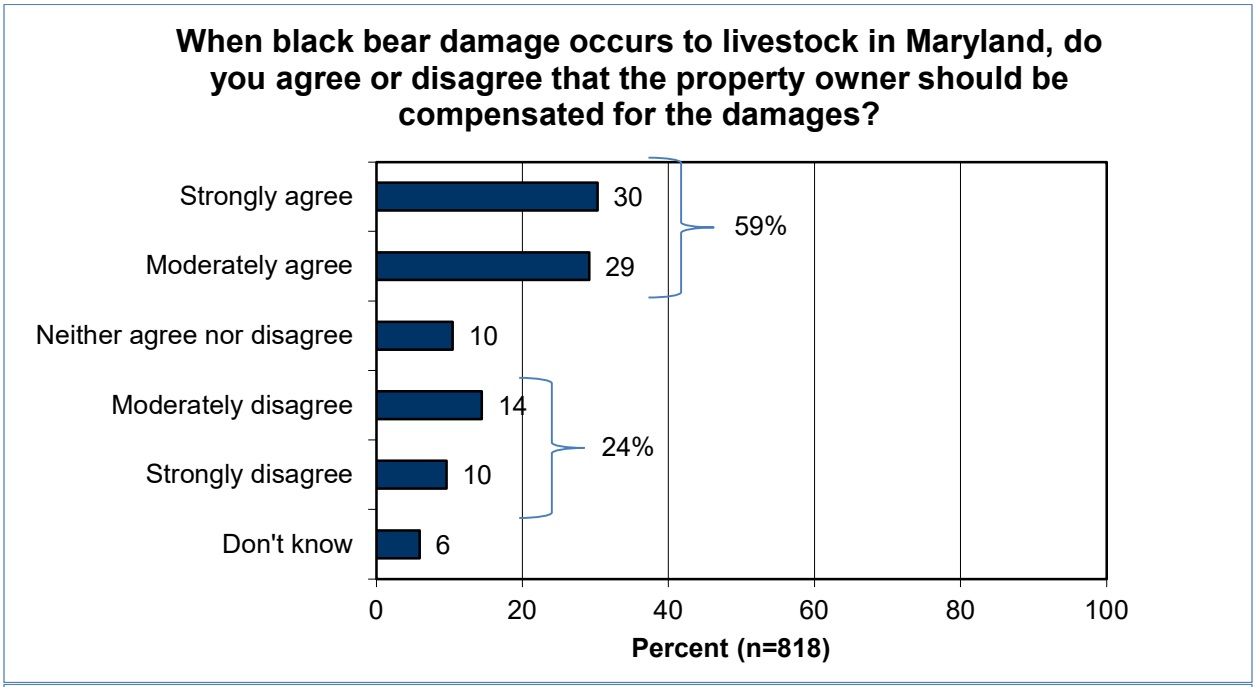
The survey listed some precautions to reduce bear problems: 80% of residents have not used any of them. However, 52% of Western Region residents store their trash inside.

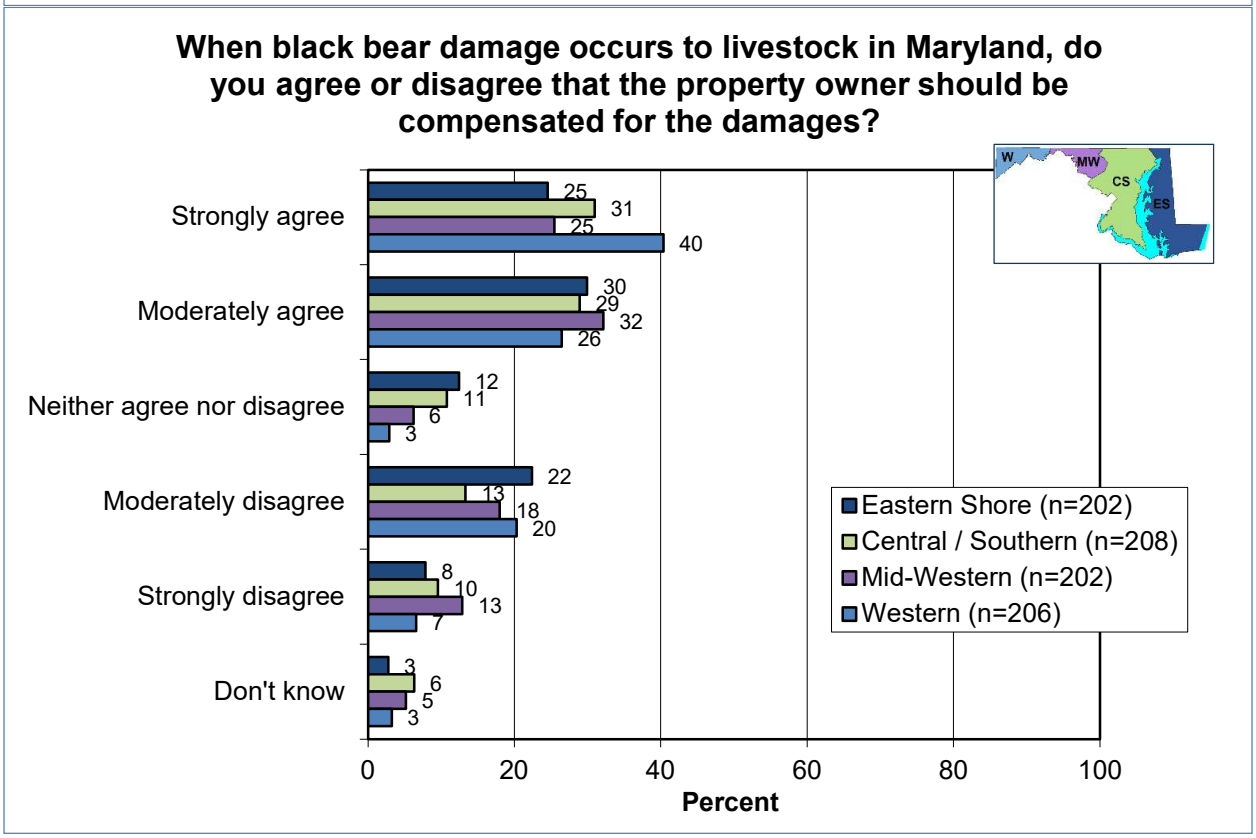


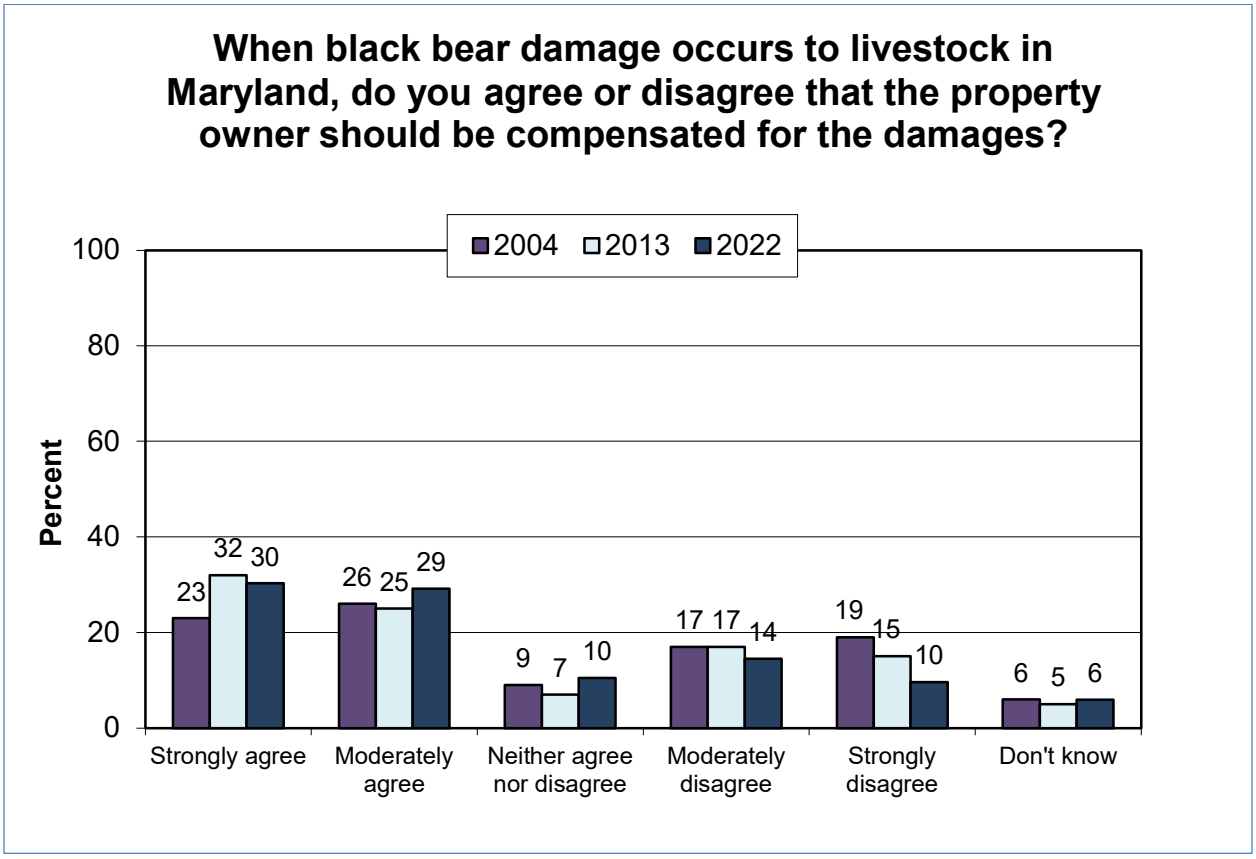


DAMAGE FROM BLACK BEARS

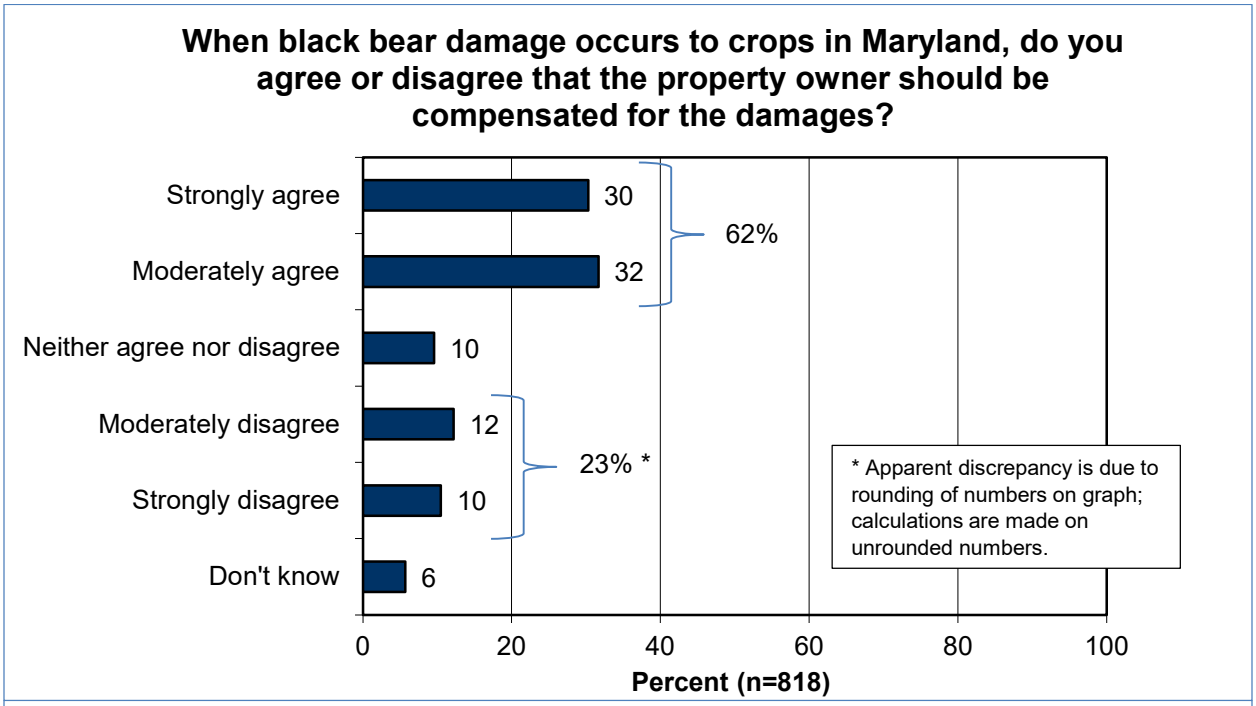
A majority of residents (59%) think property owners should be compensated for bear damage to livestock, whereas 24% disagree.

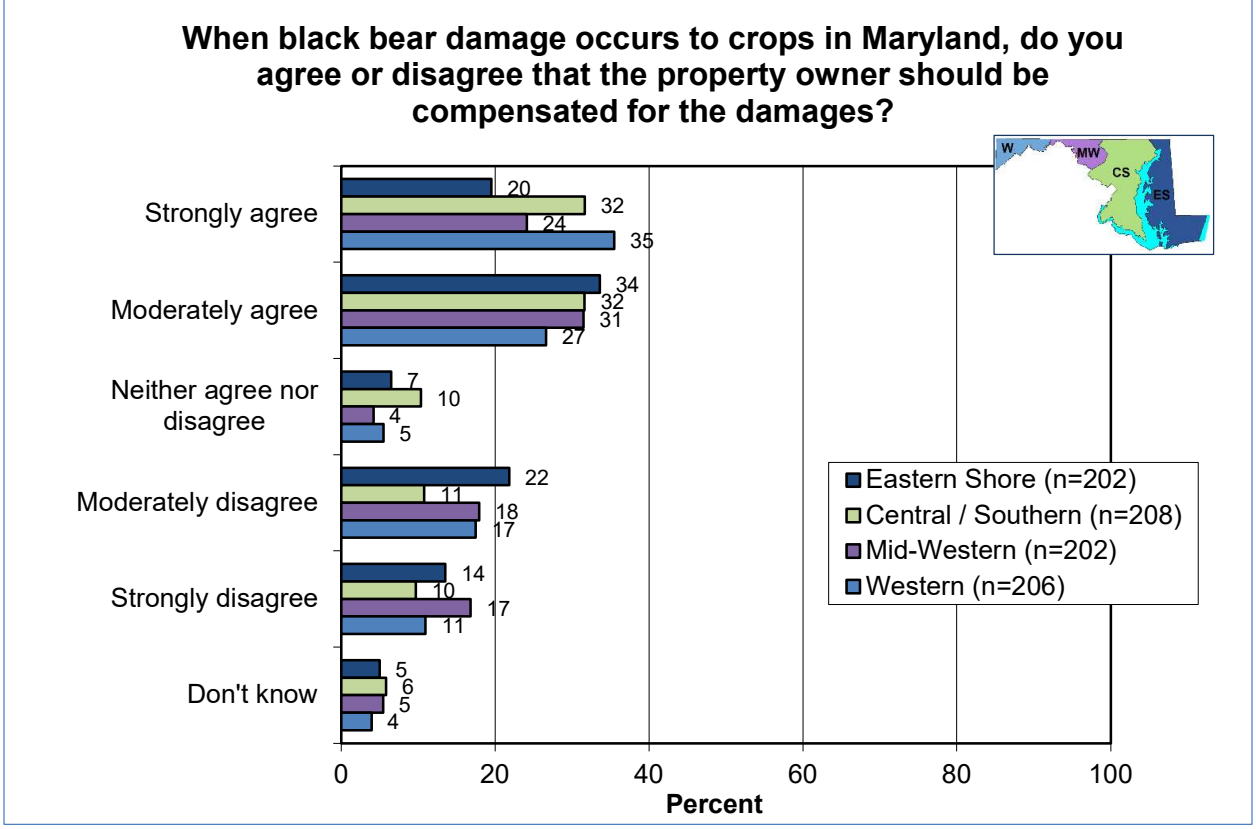


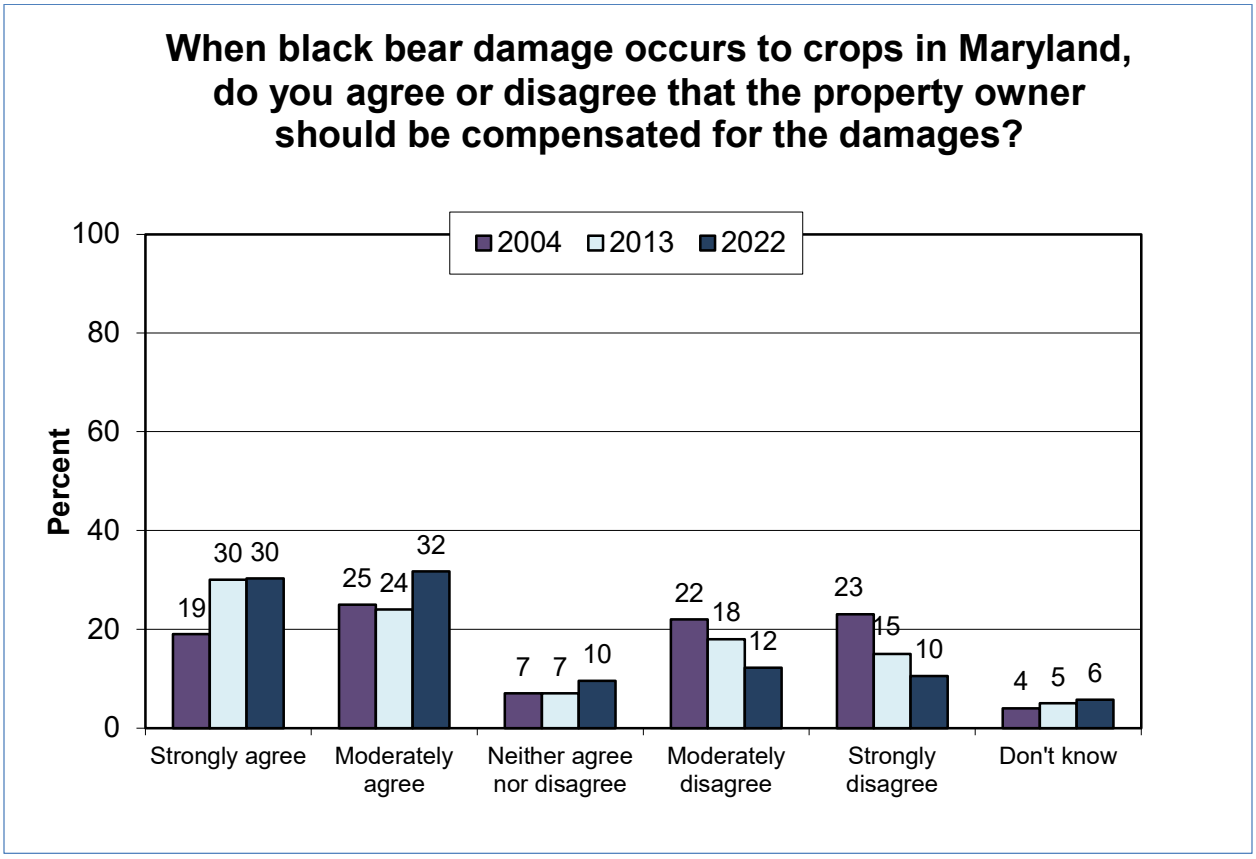



When black bear damage occurs to livestock in Maryland, do you agree or disagree that the property owner should be compensated for the damages?
2004
2013
2022
Percent
100
80
60
40
20
0
23
32
30
26
25
29
9
7
10
17
17
14
19
15
10
6
5
6
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

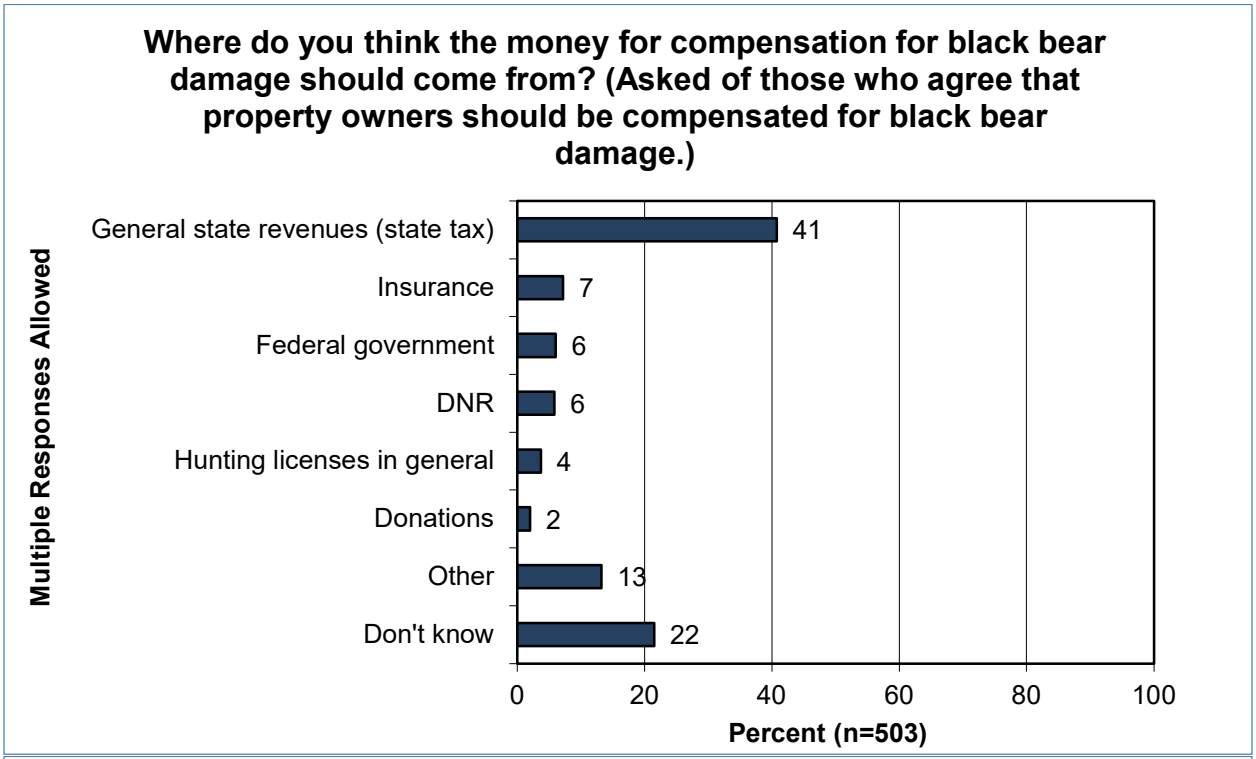
Similarly, 62% of residents agree and 23% disagree that property owners should be compensated for bear damage to crops.

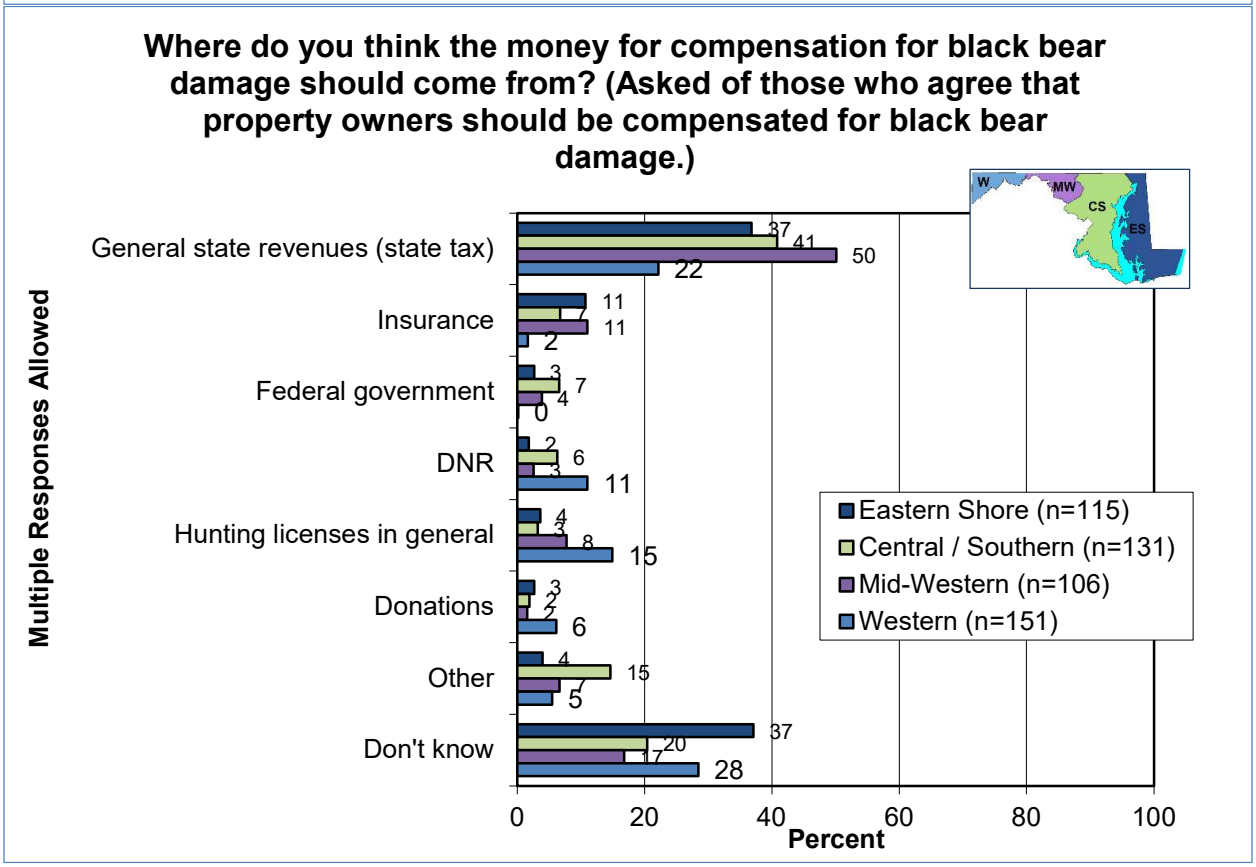





When black bear damage occurs to crops in Maryland, do you agree or disagree that the property owner should be compensated for the damages?
2004
2013
2022
Percent
100
80
60
40
20
0
19
30
30
25
24
32
7
7
10
22
18
12
23
15
10
4
5
6
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

Among those who think property owners should be compensated for damage from black bears to livestock or crops, 41% think the money should come from general state revenues (state tax). No other financial source was named by more than 7% of the group; 22% did not know.

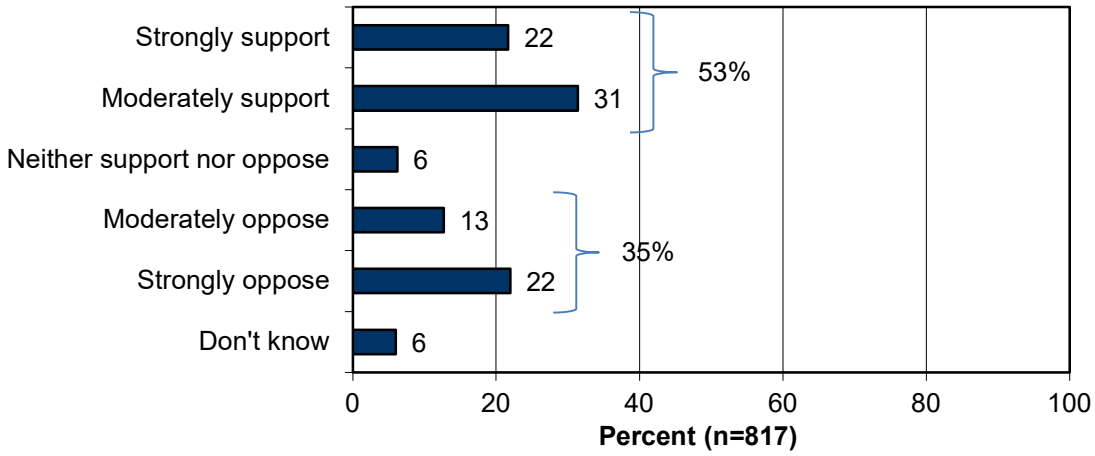




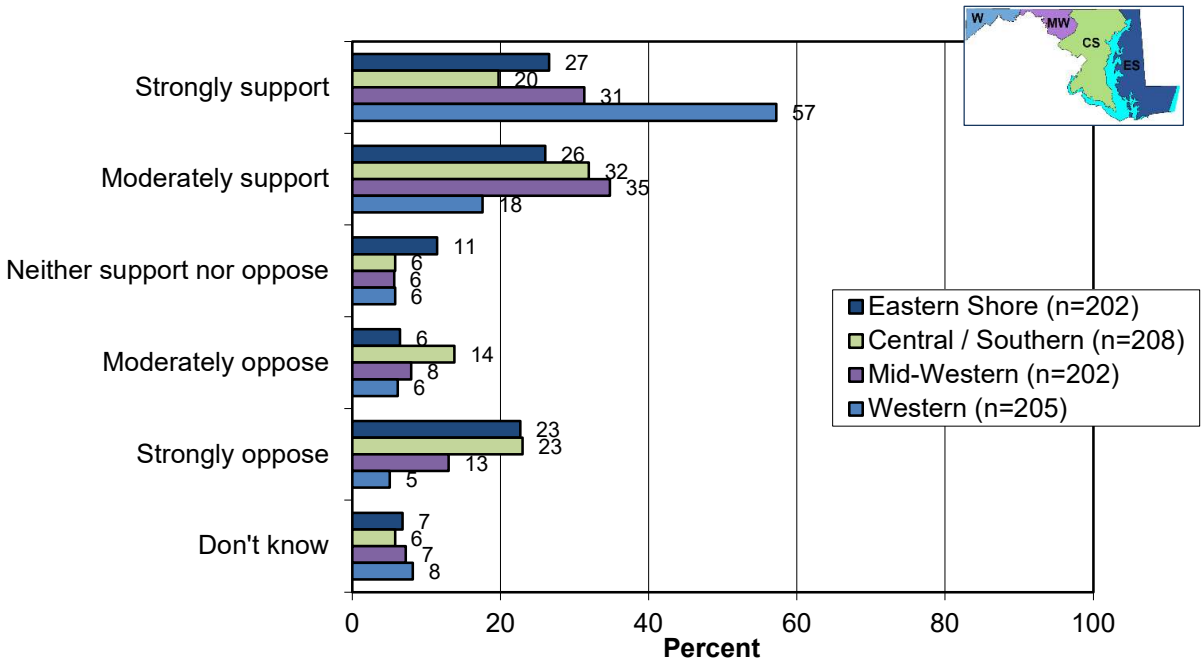
BLACK BEAR HUNTING

The survey informed respondents that black bear hunting is permitted in the four counties where bear are primarily located (Garrett, Allegany, Washington, and Frederick Counties). A majority of residents (53%) would support and 35% would oppose bear hunting in their county.

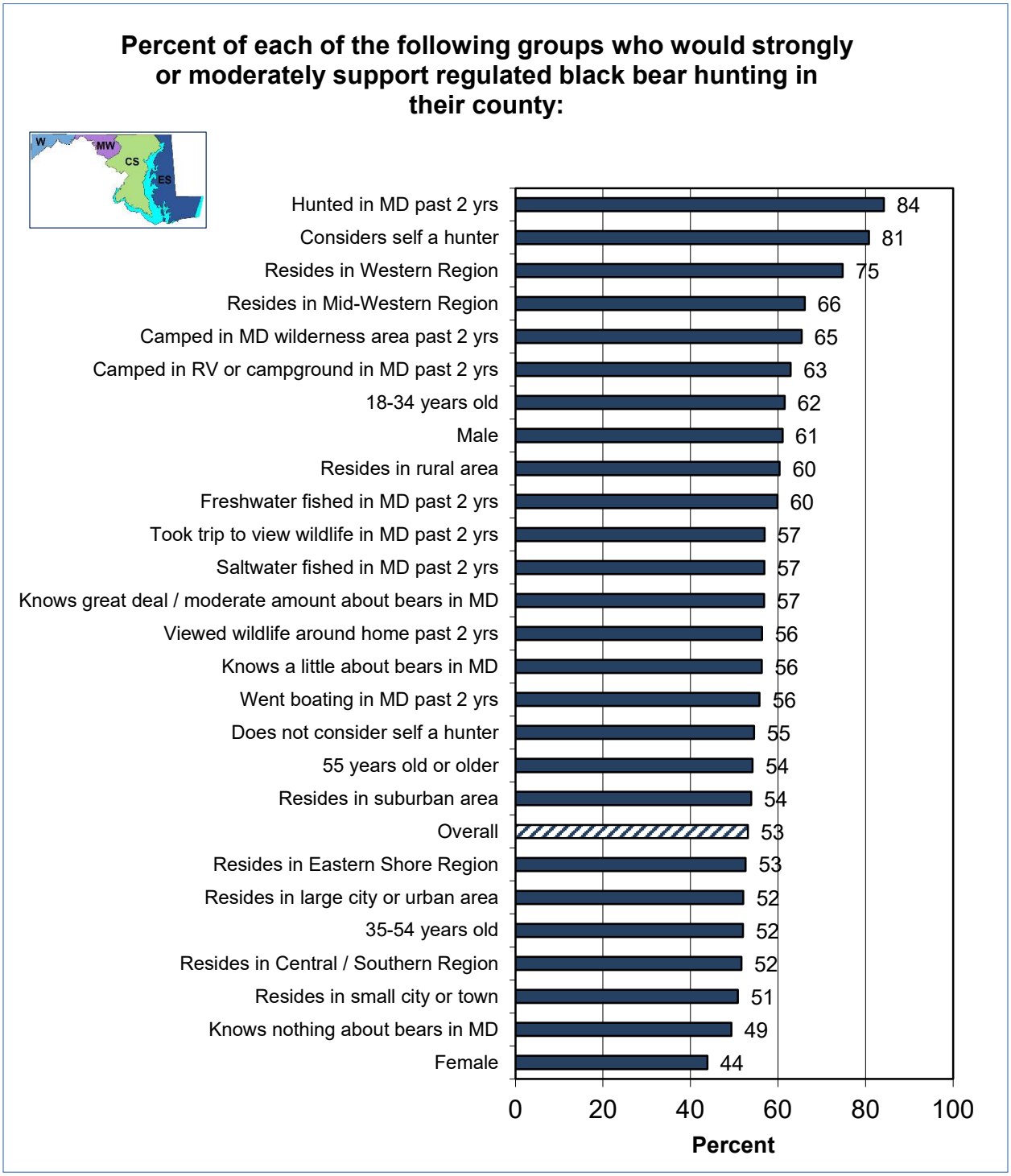
Currently, black bear hunting is permitted in Garrett, Allegany, Washington, and Frederick counties. Would you support or oppose regulated black bear hunting in your county?



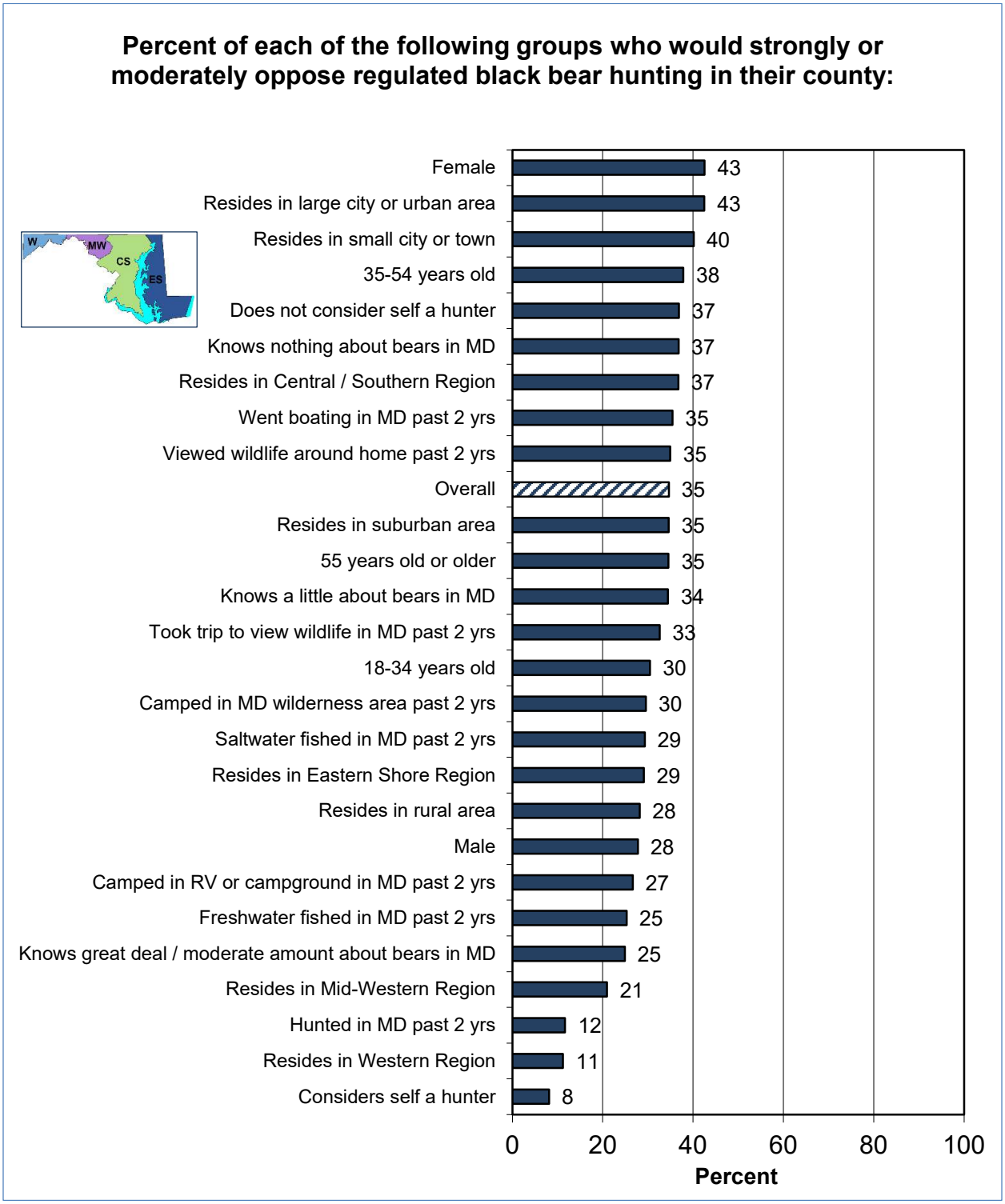
Currently, black bear hunting is permitted in Garrett, Allegany, Washington, and Frederick counties. Would you support or oppose regulated black bear hunting in your county?



Hunters and residents of the Western and Mid-Western Regions are the groups most supportive of black bear hunting in their county.

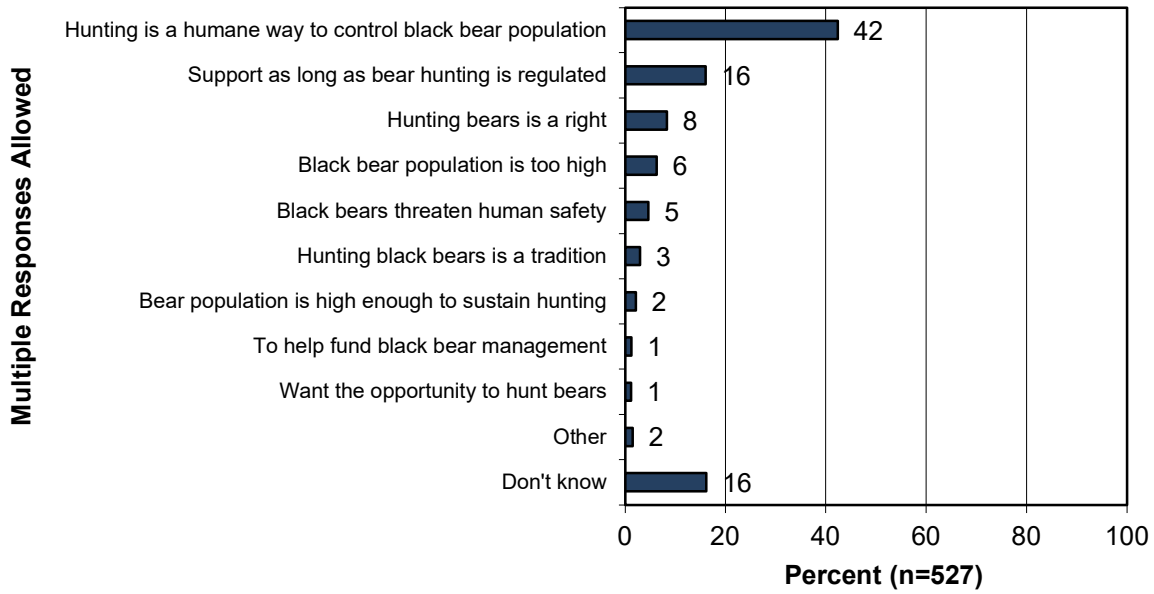


Opposition to bear hunting in their county is highest among females, large city residents, and small city or town residents.

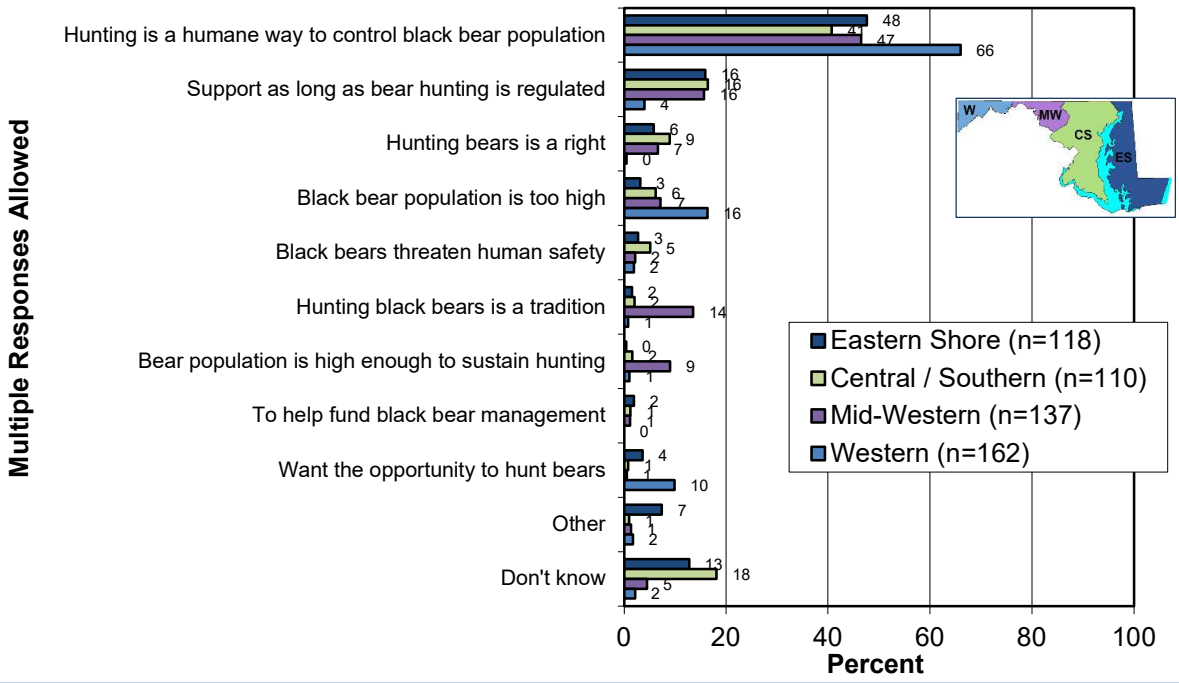


Among those who support regulated hunting of black bears in their county, 42% do so because hunting is a humane way to control the population.

Why do you support regulated hunting of black bears in your county? (Asked of those who support regulated hunting of black bears in their county.)

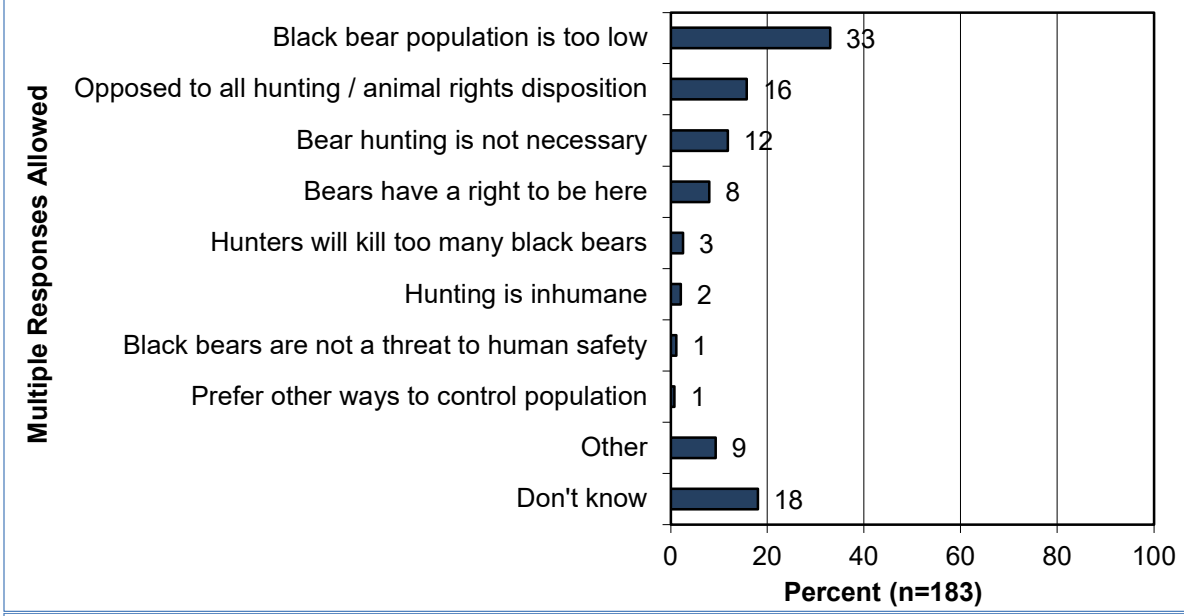


Why do you support regulated hunting of black bears in your county? (Asked of those who support regulated hunting of black bears in their county.)

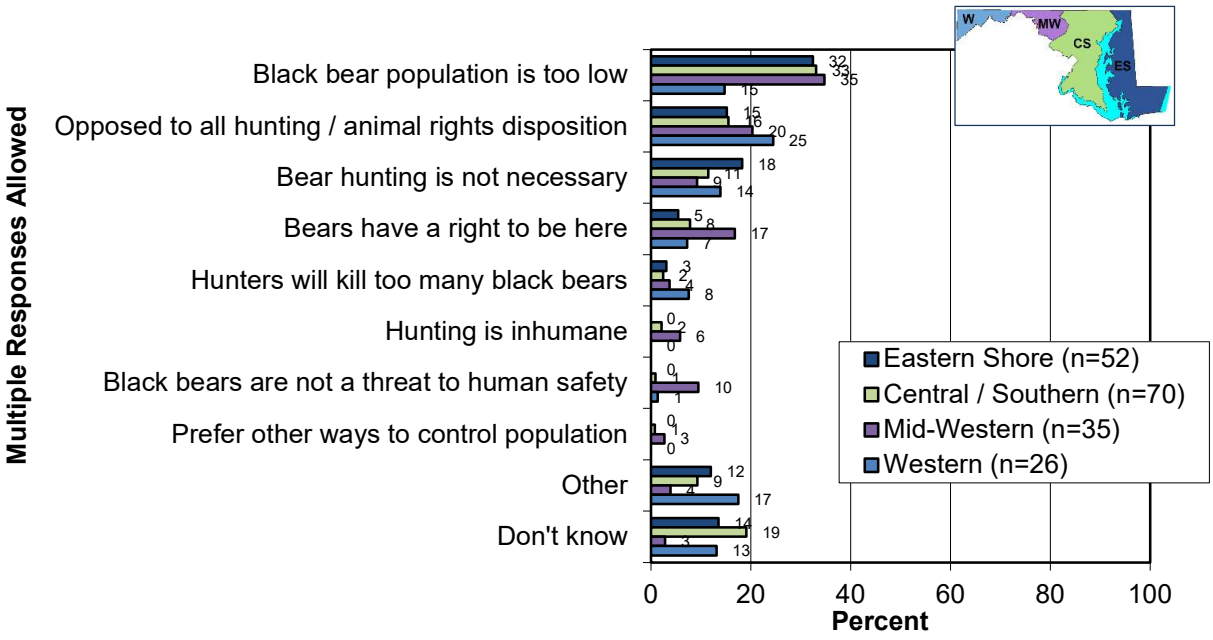


The most common reasons for those who oppose regulated bear hunting are that the population is too low, they are opposed to all hunting, and bear hunting is not necessary.

Why do you oppose regulated hunting of black bears in your county? (Asked of those who oppose regulated hunting of black bears in their county.)

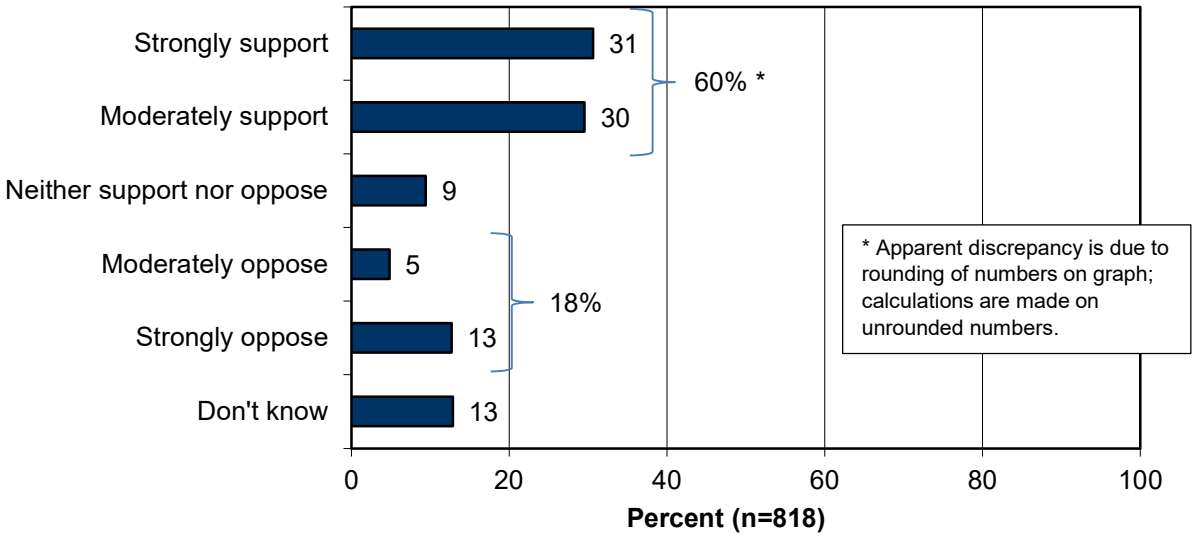


Why do you oppose regulated hunting of black bears in your county? (Asked of those who oppose regulated hunting of black bears in their county.)

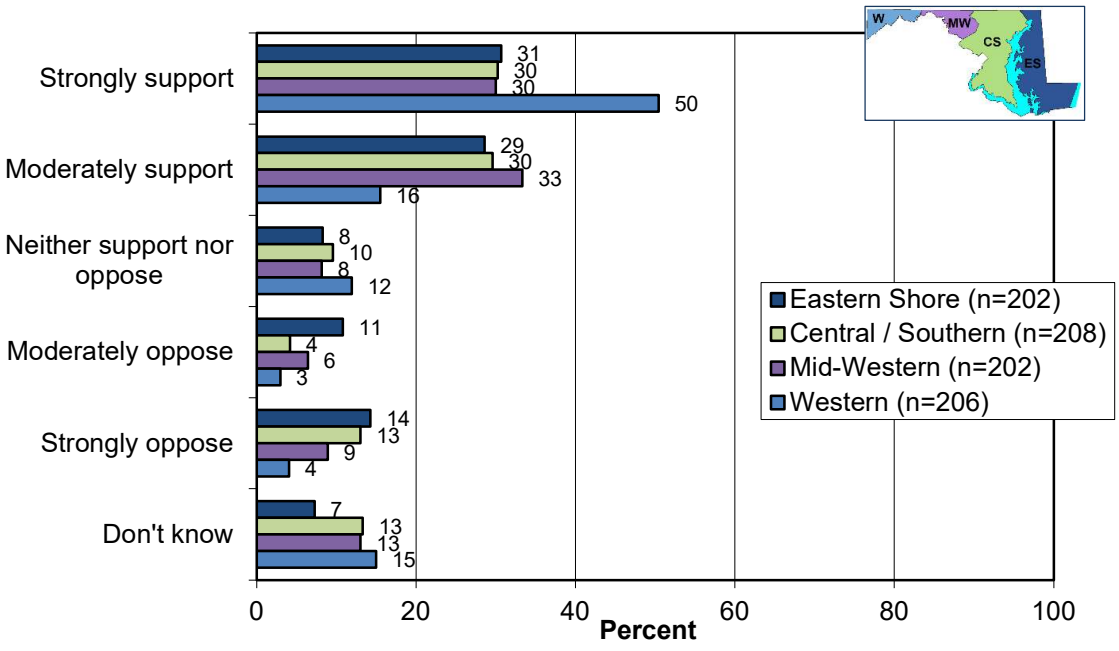


The survey asked residents if they would support or oppose bear hunting if they knew that most funds for bear management over the past 20 years came from hunter-derived revenue. With that information, support increased slightly to 60% (from 53% in the earlier question without conditions).

Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?



Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?

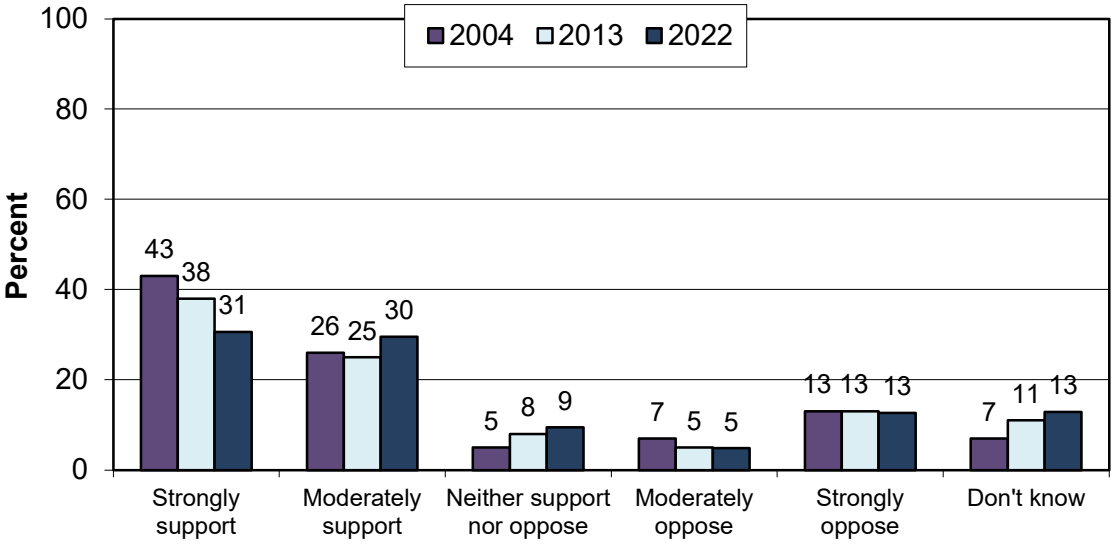


Hunters, rural residents, and older residents are the groups with the most support for bear hunting in Maryland (given the information about bear management funding).

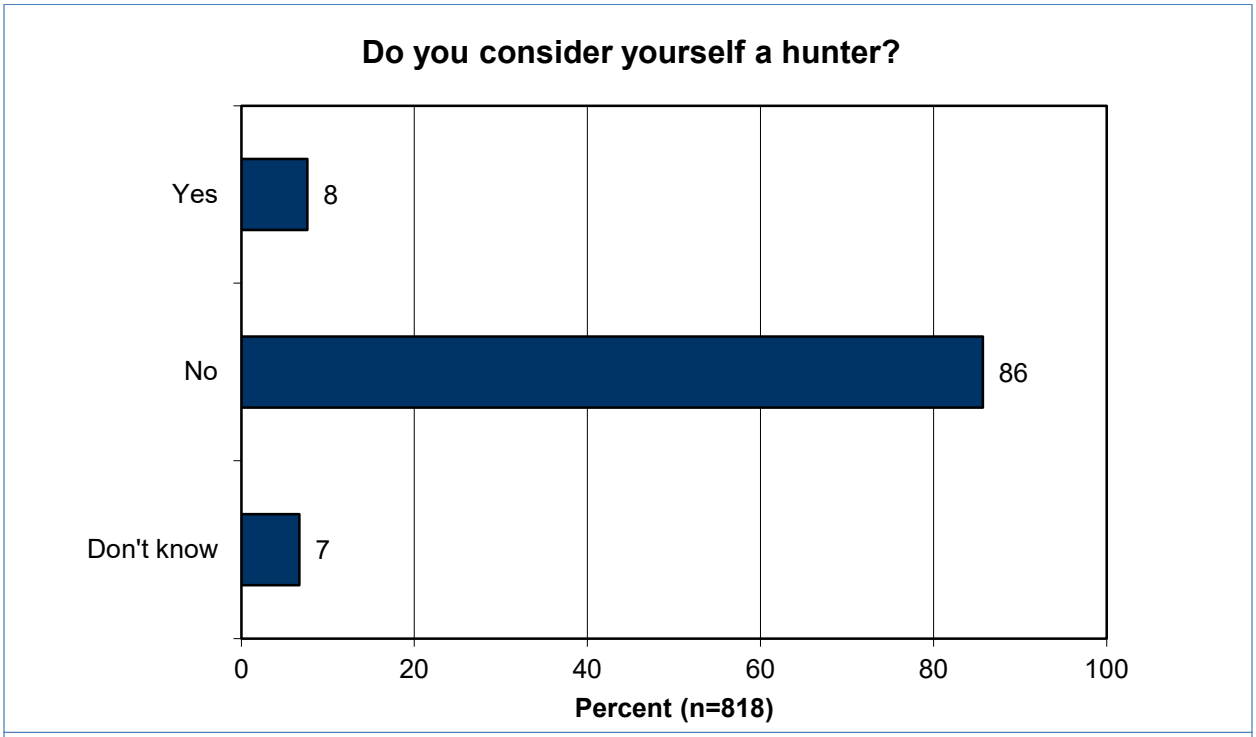
Percent of each of the following groups who would strongly or moderately support regulated black bear hunting in Maryland if they knew that most bear management funding came from hunter-derived revenue sources in the past 20 years:

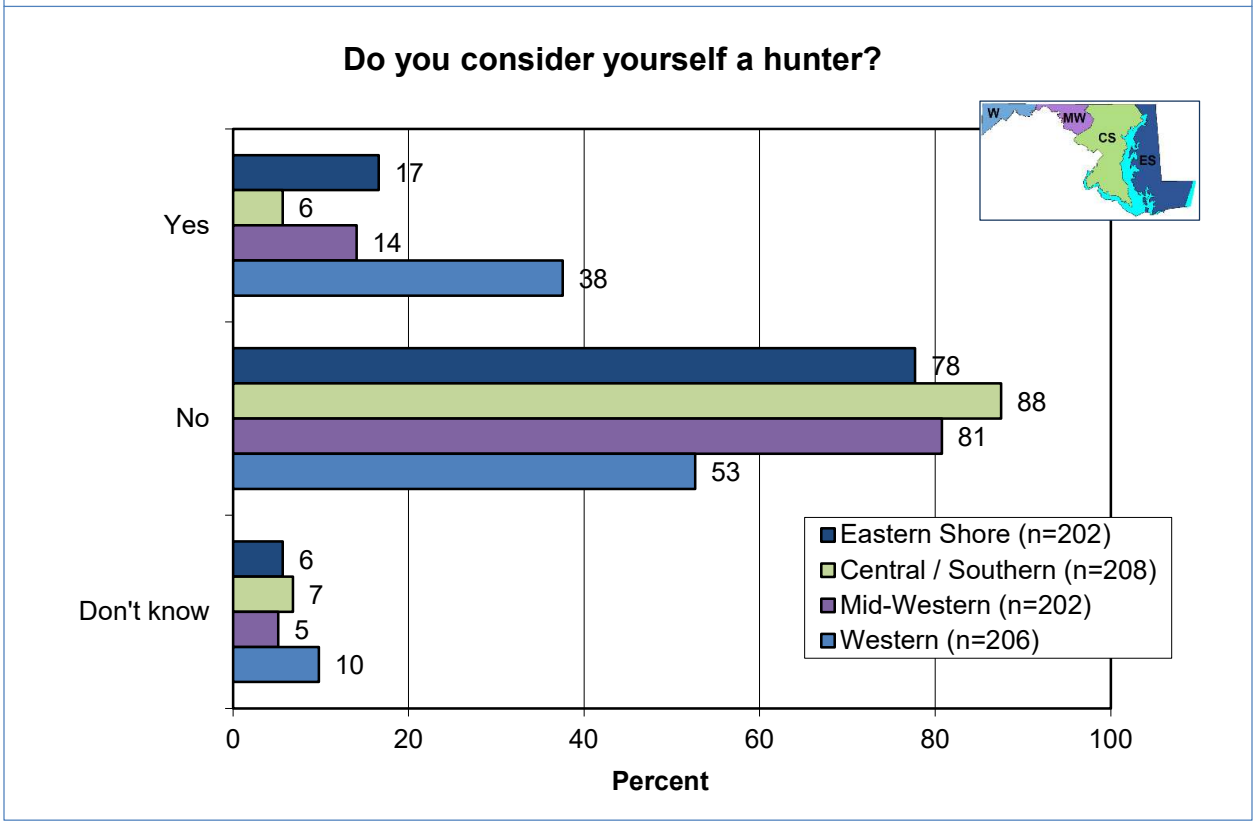
The groups with the most opposition to bear hunting in Maryland, despite the information about bear management funding, are large city residents, those who know nothing about bears, Eastern Shore Region residents, females, and those in the middle age category.

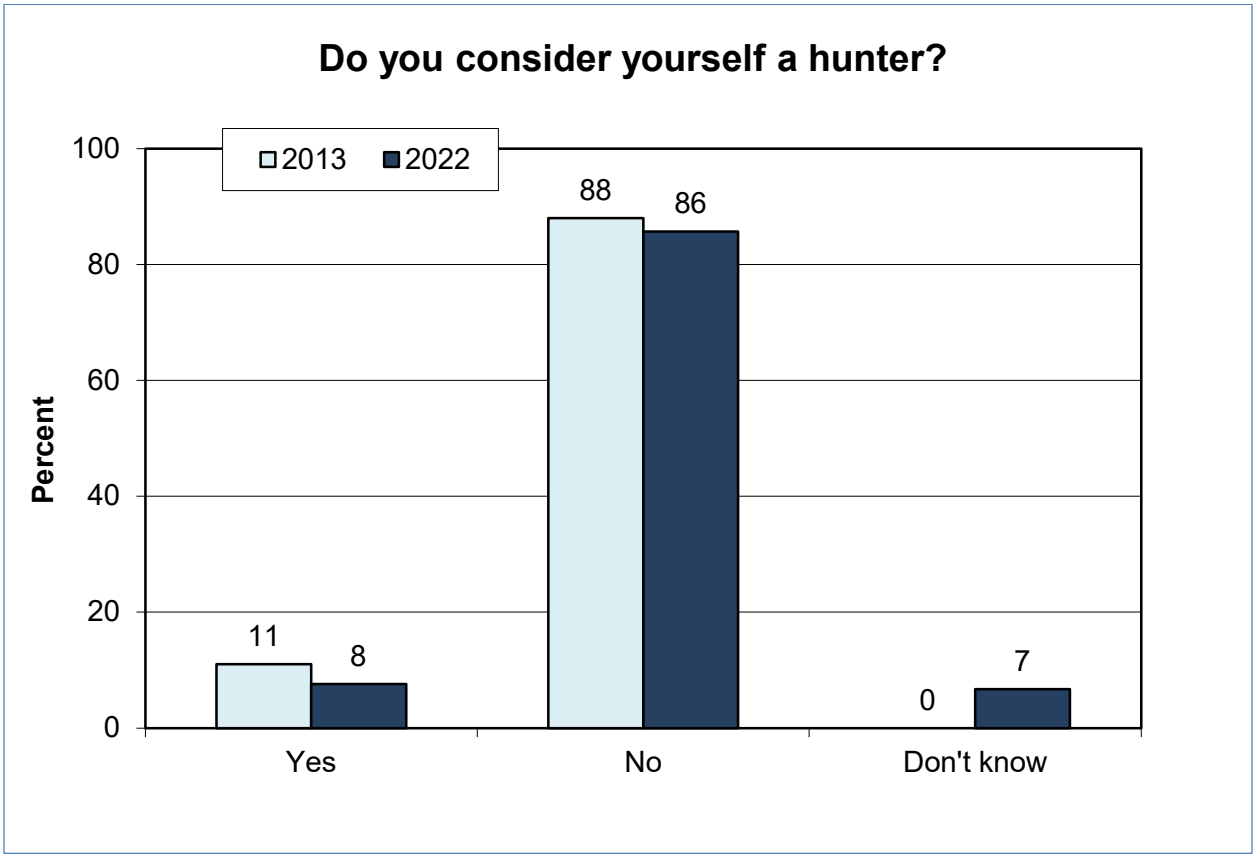
Percent of each of the following groups who would strongly or moderately oppose regulated black bear hunting in Maryland if they knew that most bear management funding came from hunter-derived revenue sources in the past 20 years:


Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?
2004
2013
2022
Percent
100
80
60
40
20
0
43
38
31
26
25
30
5
8
9
7
5
5
13
13
13
7
11
13
Strongly support
Moderately support
Neither support nor oppose
Moderately oppose
Strongly oppose
Don't know

Overall, 8% of Maryland residents consider themselves to be hunters.

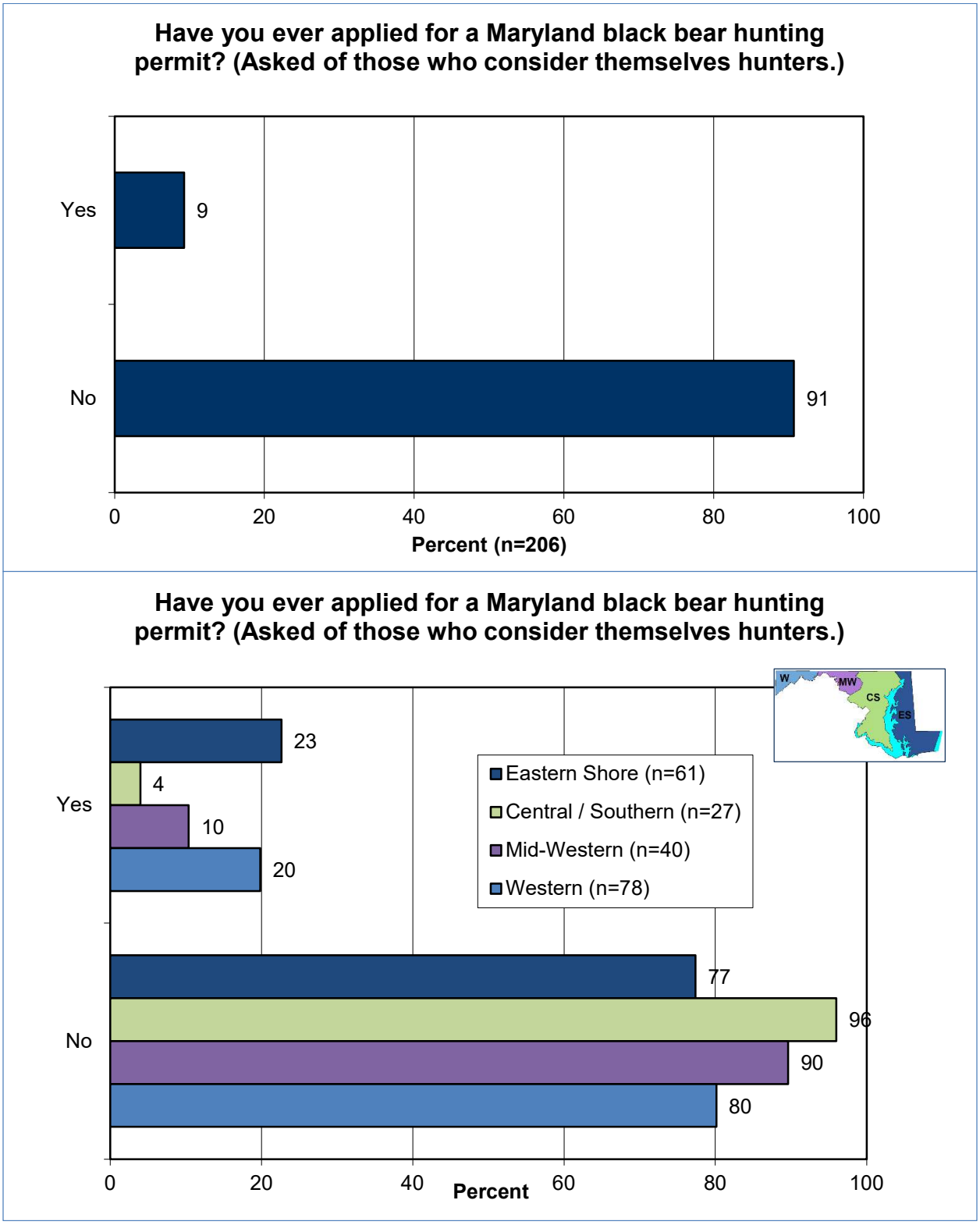


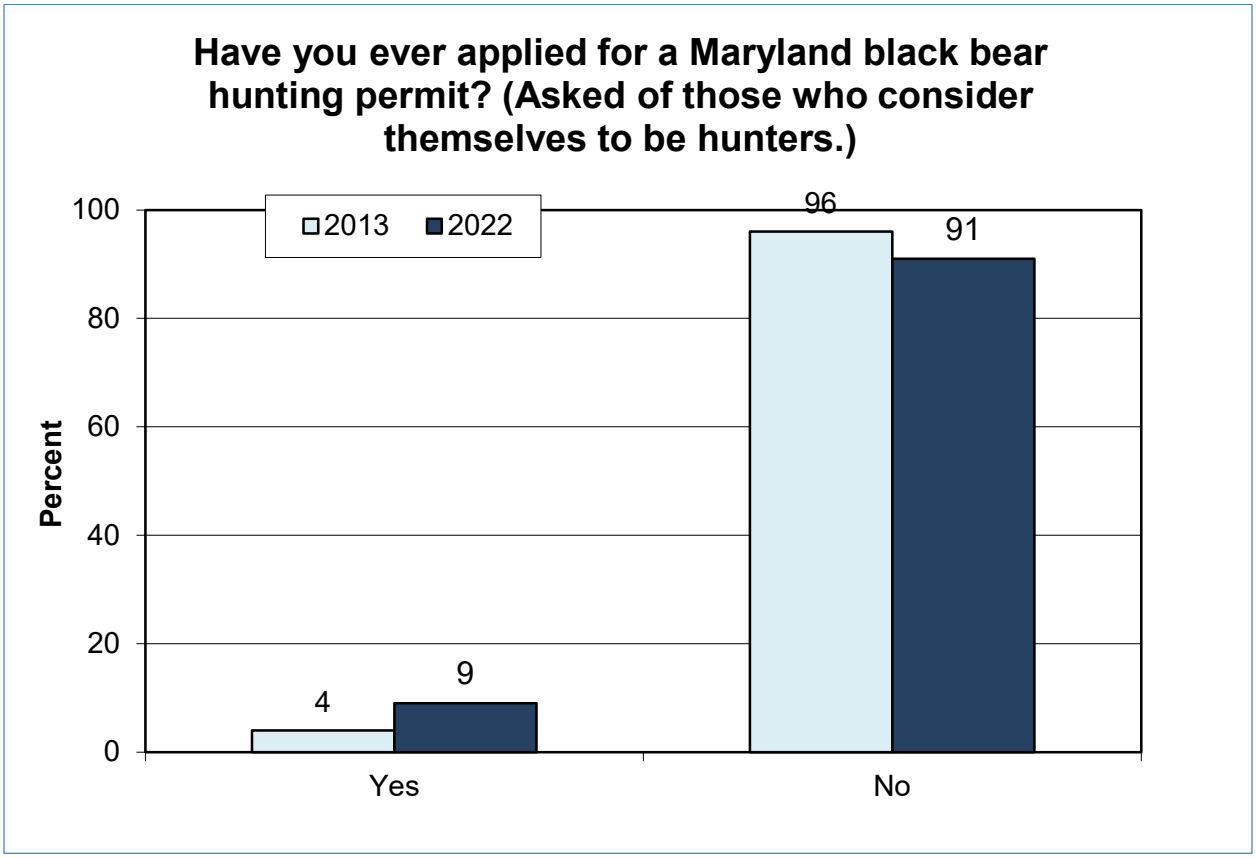




This question was not included in the 2004 survey.

Among those who consider themselves hunters, 9% have applied for a Maryland black bear hunting permit.

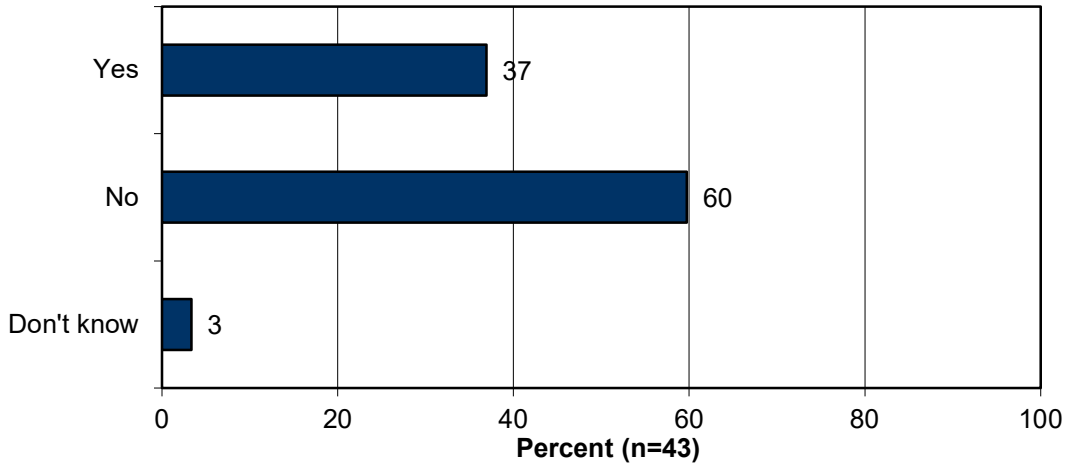




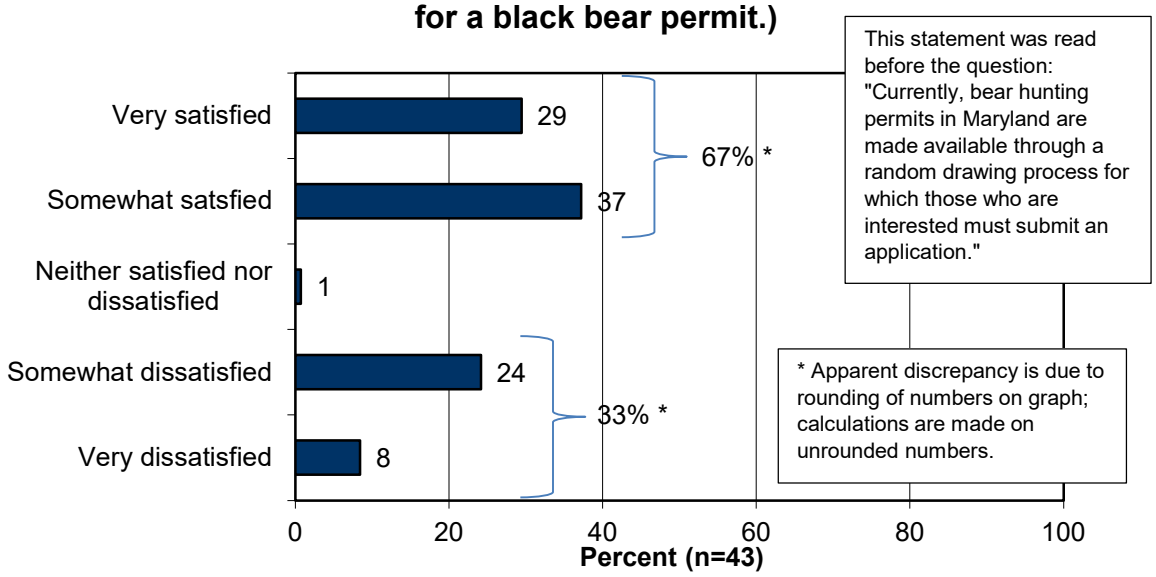
This question was not included in the 2004 survey.

Over a third of those who applied for a bear permit (37%) have hunted black bear in Maryland, and two thirds of this group (67%) are satisfied with the current black bear hunting system. (Regional and trend graphs are not shown because of the low sample size.)

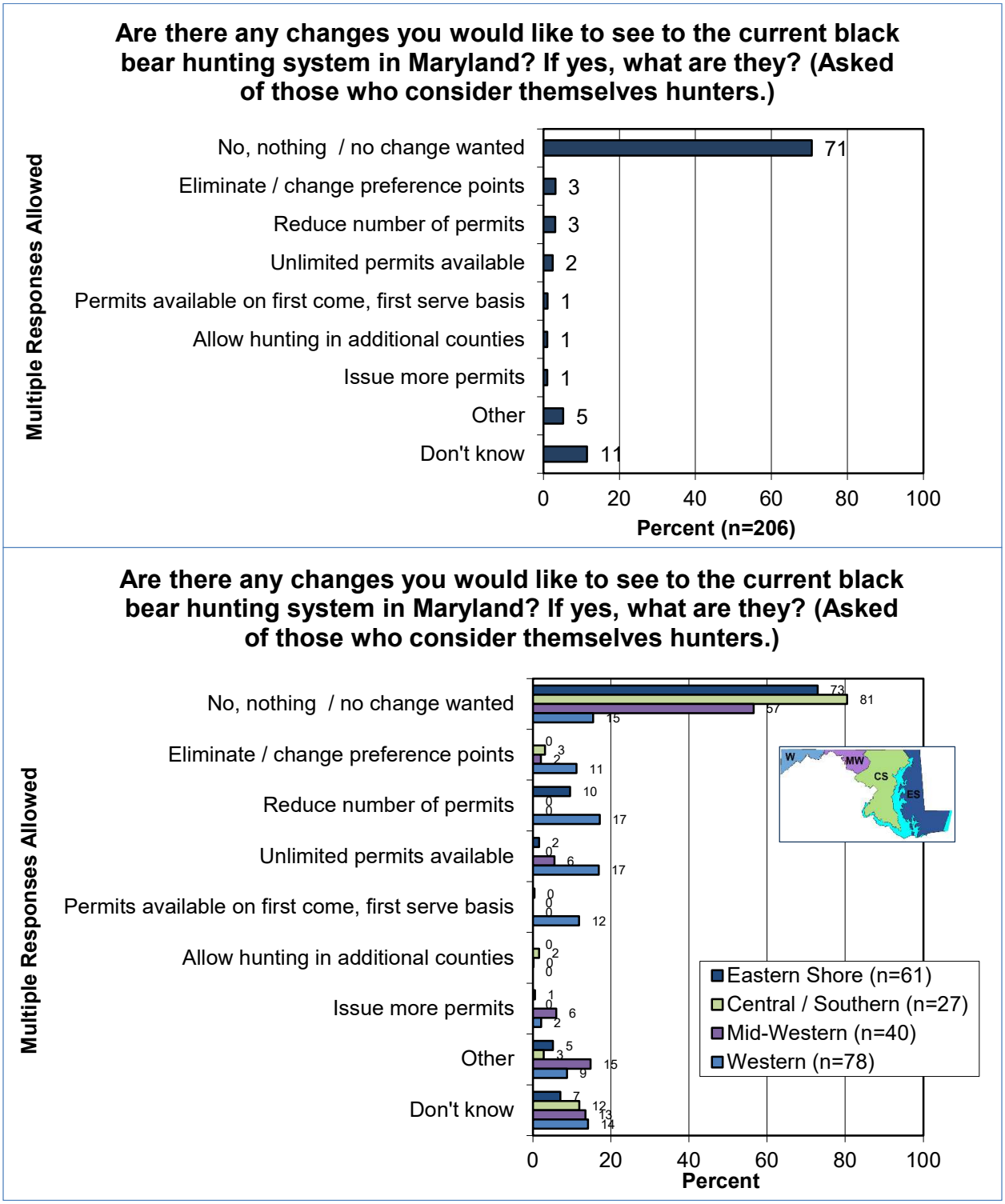
Have you ever participated in hunting black bear in Maryland? (Asked of those who have applied for a black bear permit.)



How satisfied or dissatisfied are you with the current black bear hunting system in Maryland? (Asked of those who have applied for a black bear permit.)

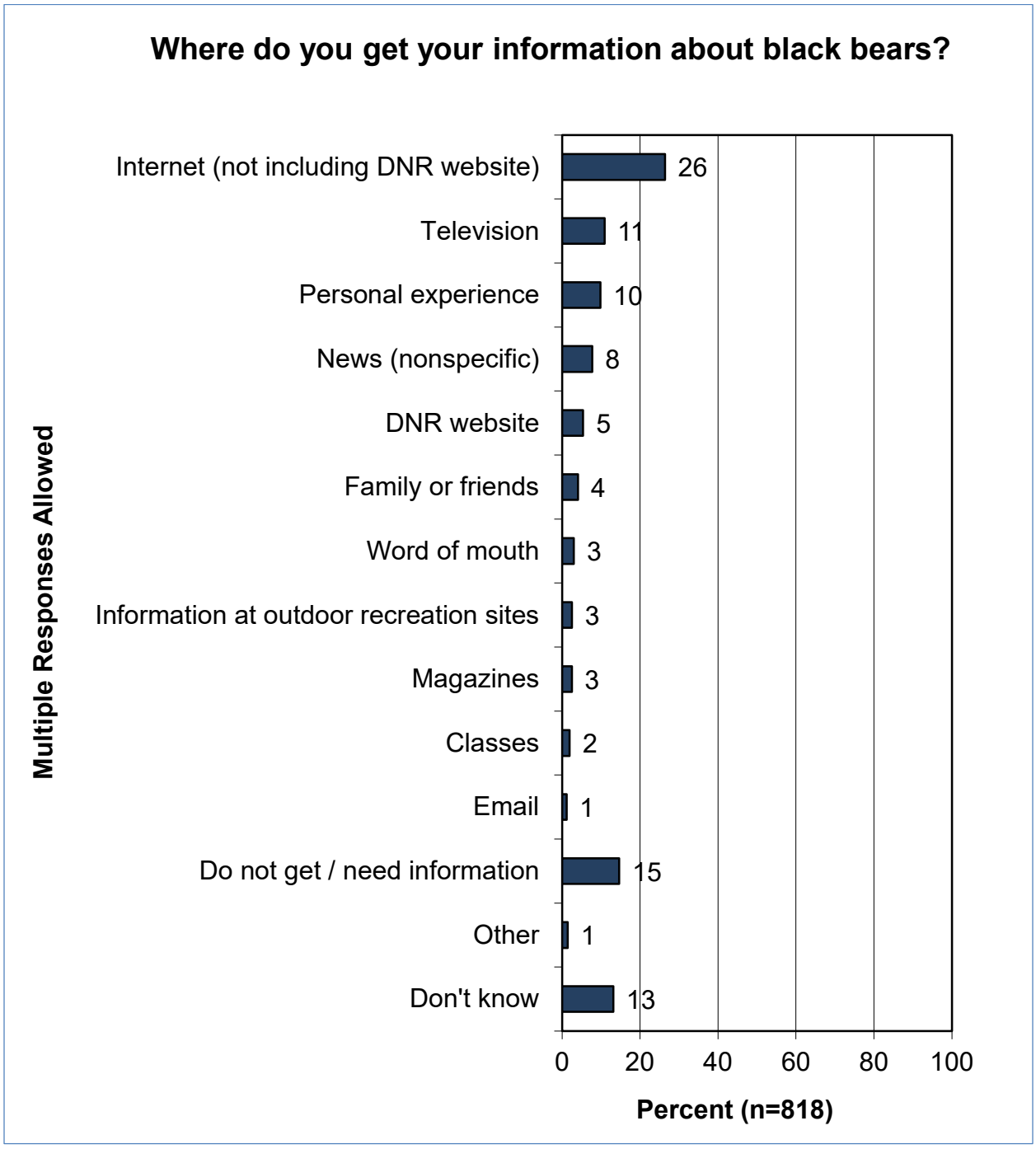


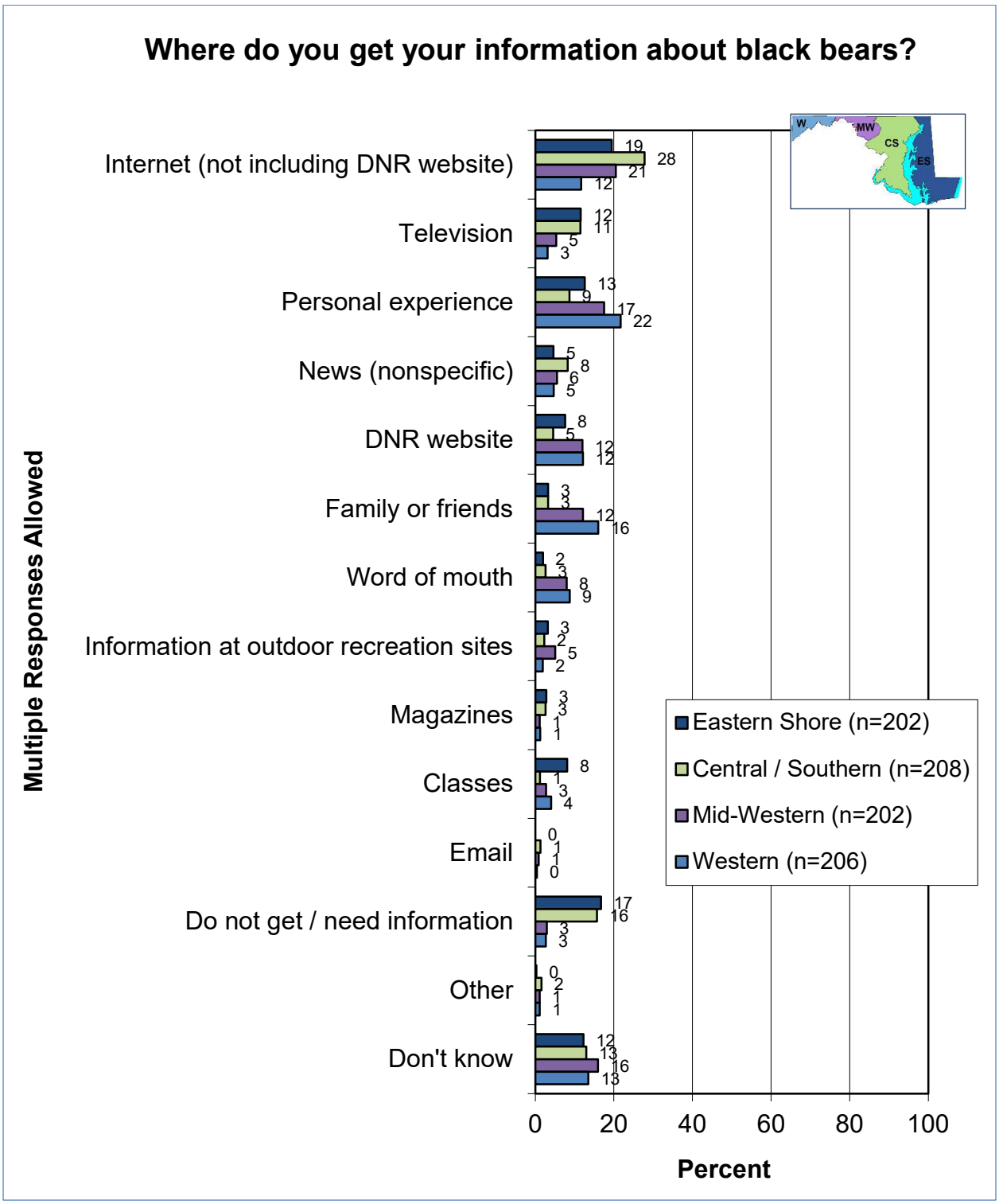
The majority of those who consider themselves hunters (77%) do not have any desired changes to the current black bear hunting system in Maryland.



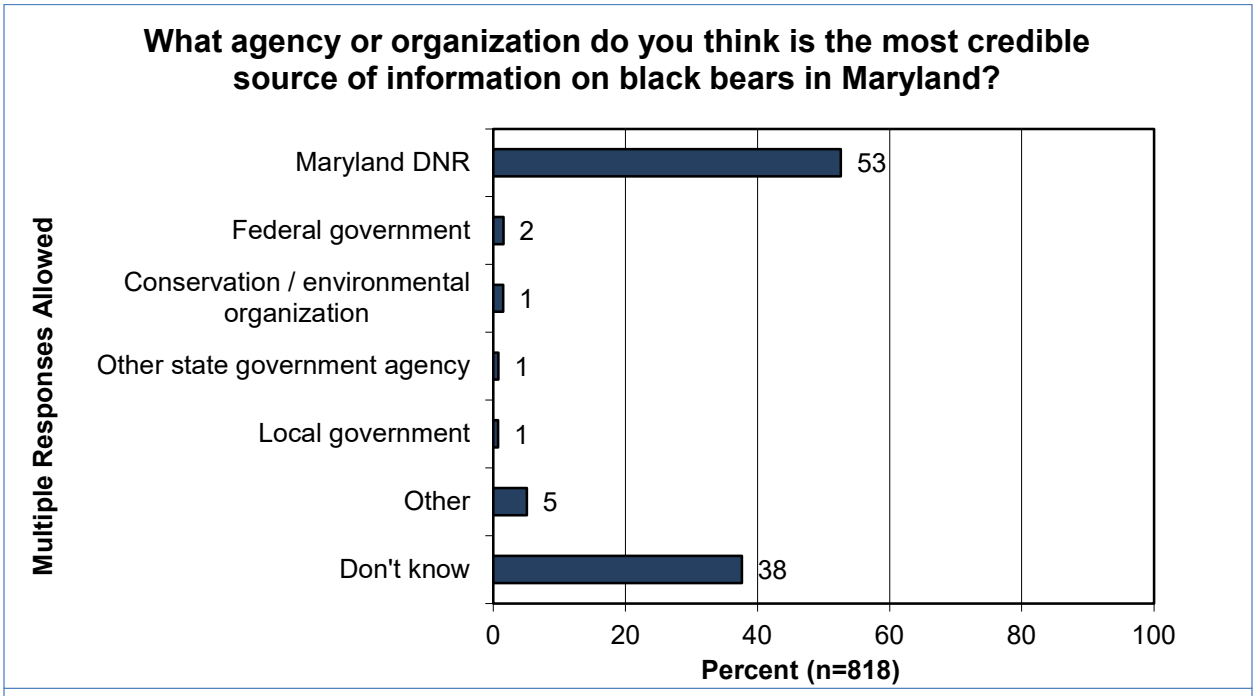
INFORMATION ABOUT BLACK BEARS

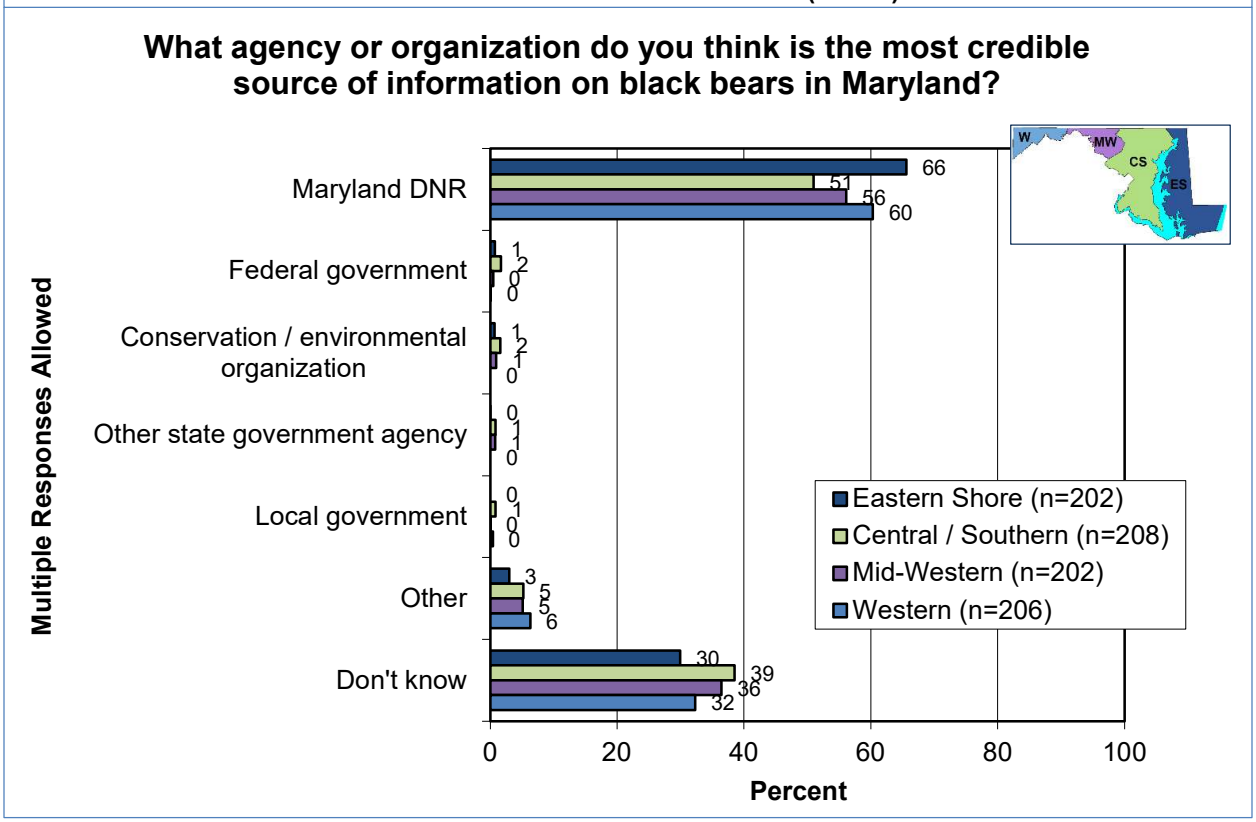
In an open-ended question, residents were asked where they get information about black bears. The top responses are the internet (not including the DNR website) (26% stated this), TV (11%), personal experience (10%), the news (nonspecific) (8%), and the DNR website (5%). Note that 15% do not need or get information and 13% do not know.




Where do you get your information about black bears?
Multiple Responses Allowed
Internet (not including DNR website)
19 28 21 12
Television
12 11 5 3
Personal experience
13 9 17 22
News (nonspecific)
5 8 6 5
DNR website
8 5 12 12
Family or friends
3 3 12 16
Word of mouth
2 3 8 9
Information at outdoor recreation sites
3 2 5 2
Magazines
3 3 1 1
Classes
8 1 3 4
Email
0 1 1 0
Do not get / need information
17 16 3 3
Other
0 2 1 1
Don't know
12 13 16 13
W
MW
CS
ES
Eastern Shore (n=202)
Central / Southern (n=208)
Mid-Western (n=202)
Western (n=206)
0 20 40 60 80 100
Percent

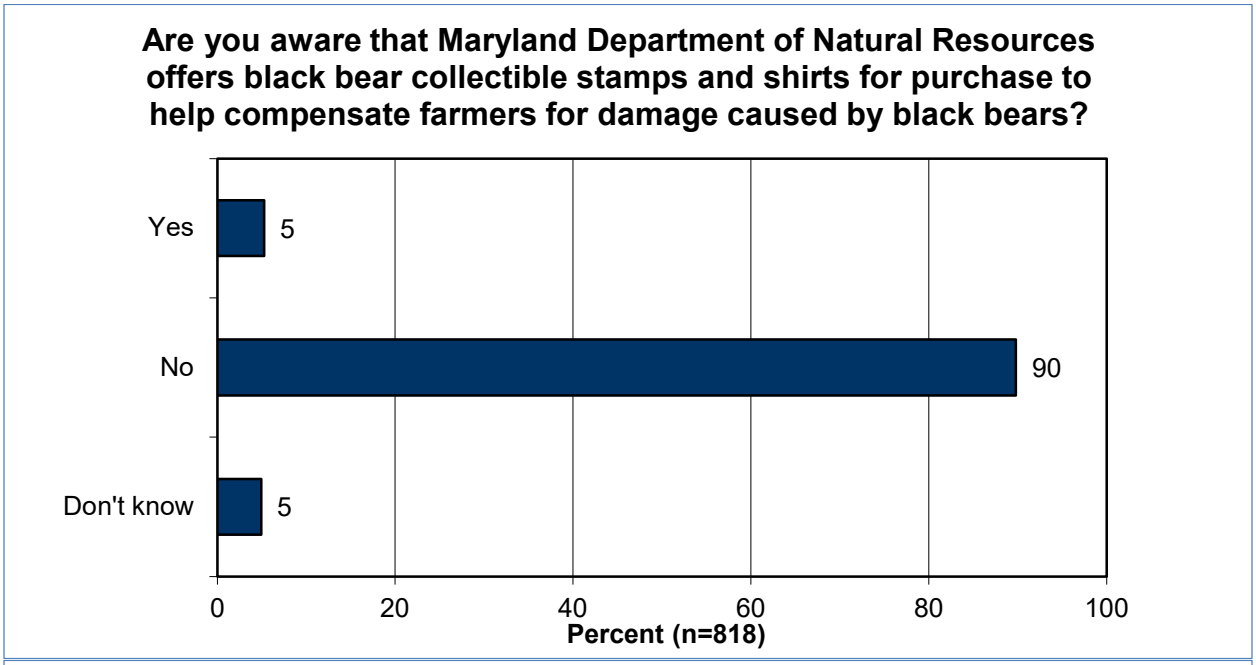
Residents were asked to name the agency or organization that is the most credible source of information on black bears in Maryland, in another open-ended question. By far the top response was the DNR (53% stated this), with no other organization being named by more than 2% of residents. A substantial percentage (38%) did not know.

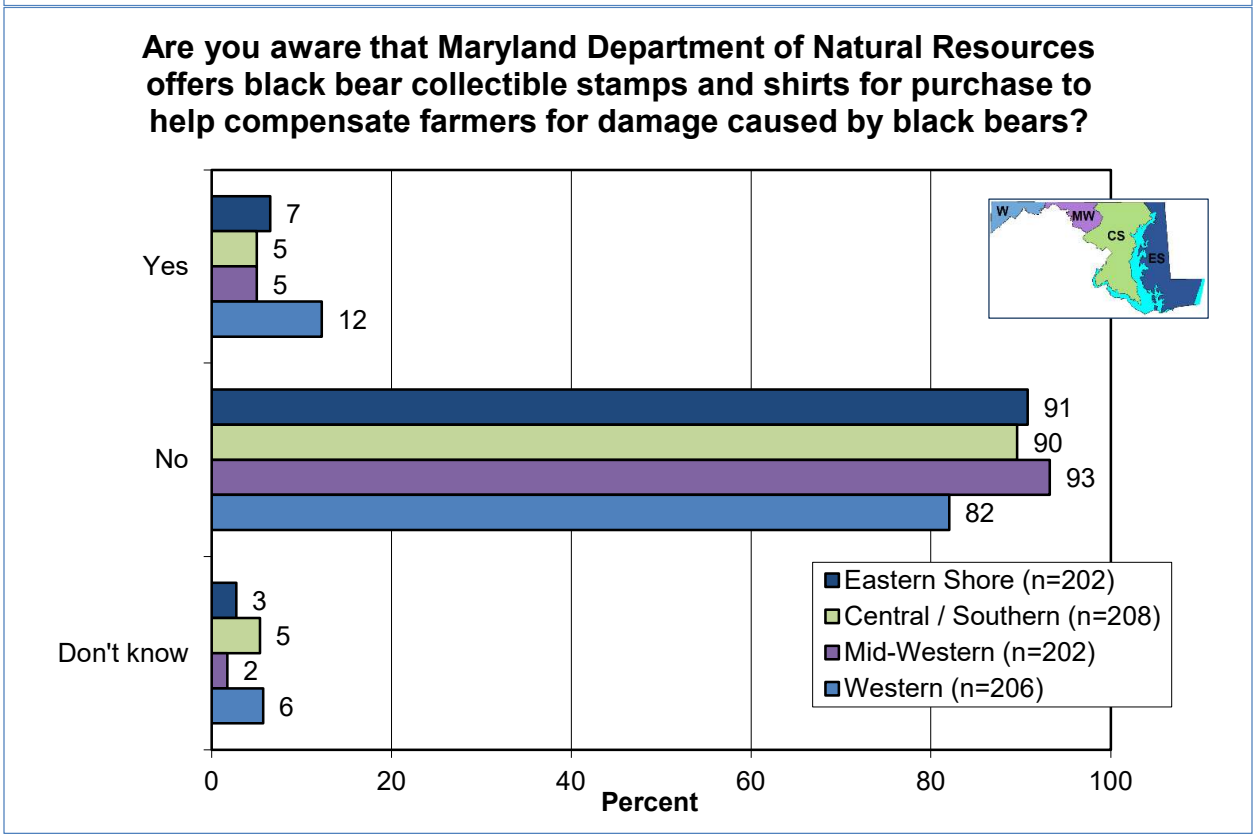




DNR BLACK BEAR PRODUCTS

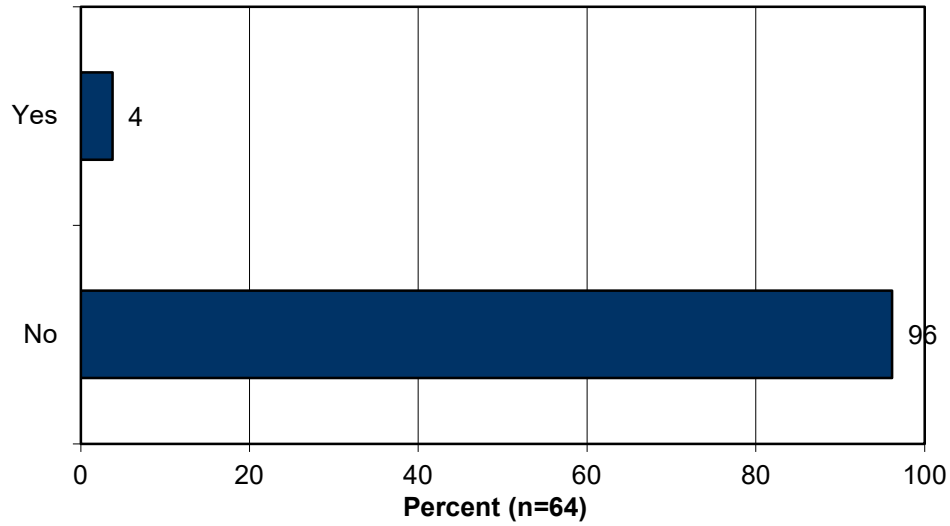
Only 5% of residents were aware that the DNR offers black bear collectible stamps and shirts for purchase to help compensate farmers for damage caused by bears. (This section is new to the survey, so trend graphs are not included.)



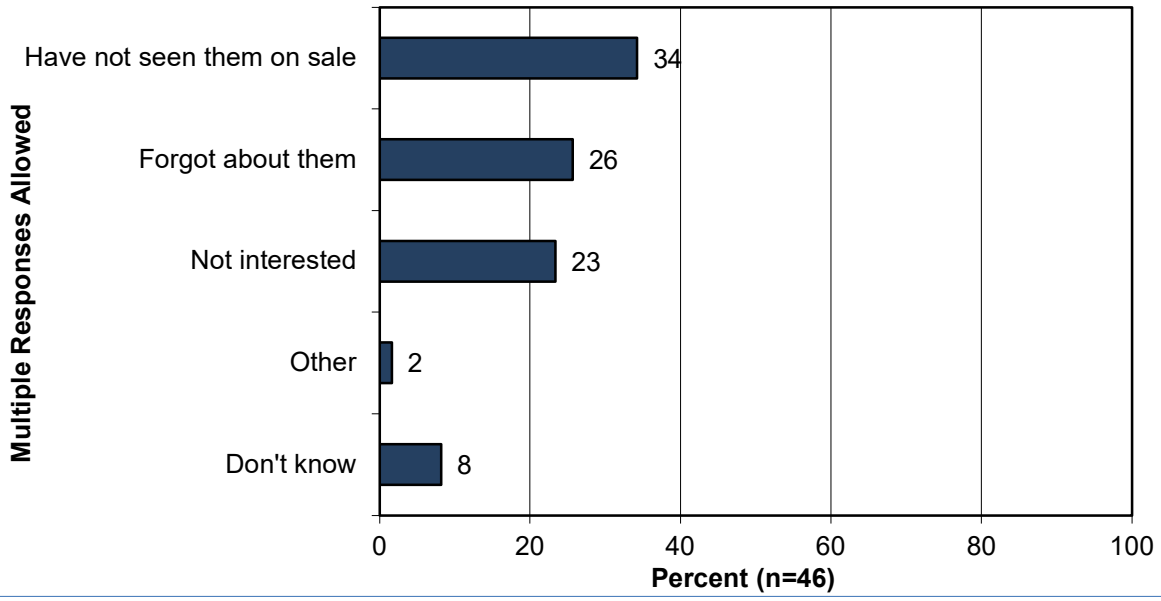


Among those who were aware of the DNR products, 4% have purchased them. Of those who were aware but have not purchased the products, the most common reasons were that they have not seen them on sale, they forgot about them, and they are not interested. (Regional graphs are not included for these two questions because of the low sample sizes.)

Have you ever purchased black bear products from the Maryland Department of Natural Resources? (Asked of those who are aware that Maryland Department of Natural Resources offers black bear collectible stamps and shirts for purchase.)

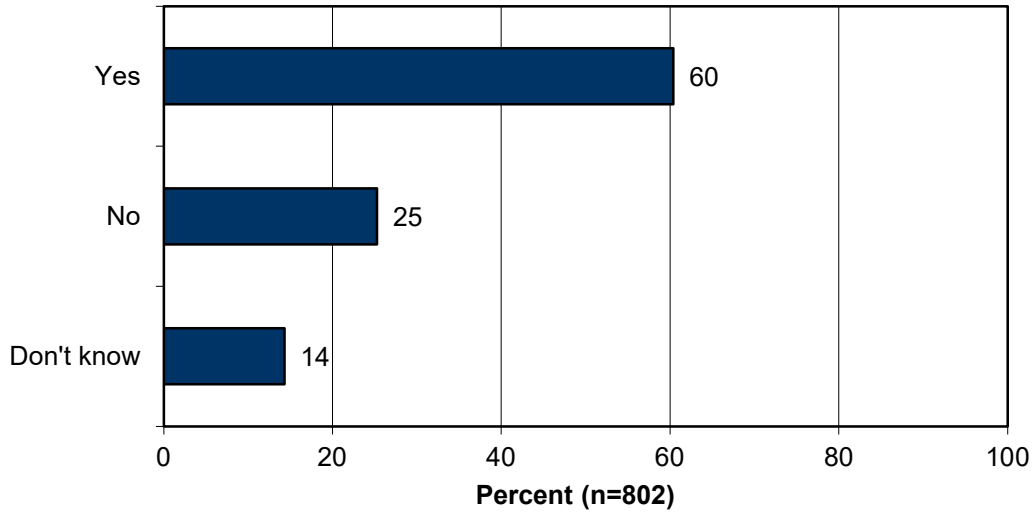


Why haven't you purchased black bear products from the Maryland Department of Natural Resources? (Asked of those who are aware of the products but have not purchased them.)

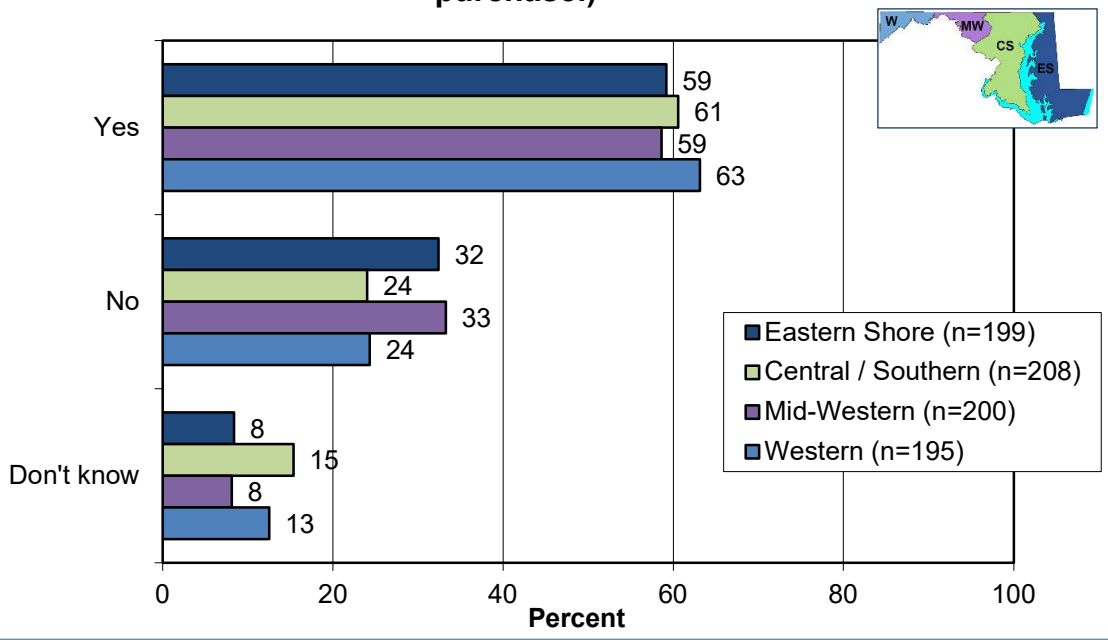


A majority of those who were not aware of the DNR products (60%) said they would consider purchasing them in the future.

Would you consider purchasing black bear products from the Maryland Department of Natural Resources? (Asked of those who are not aware that Maryland Department of Natural Resources offers black bear collectible stamps and shirts for purchase.)

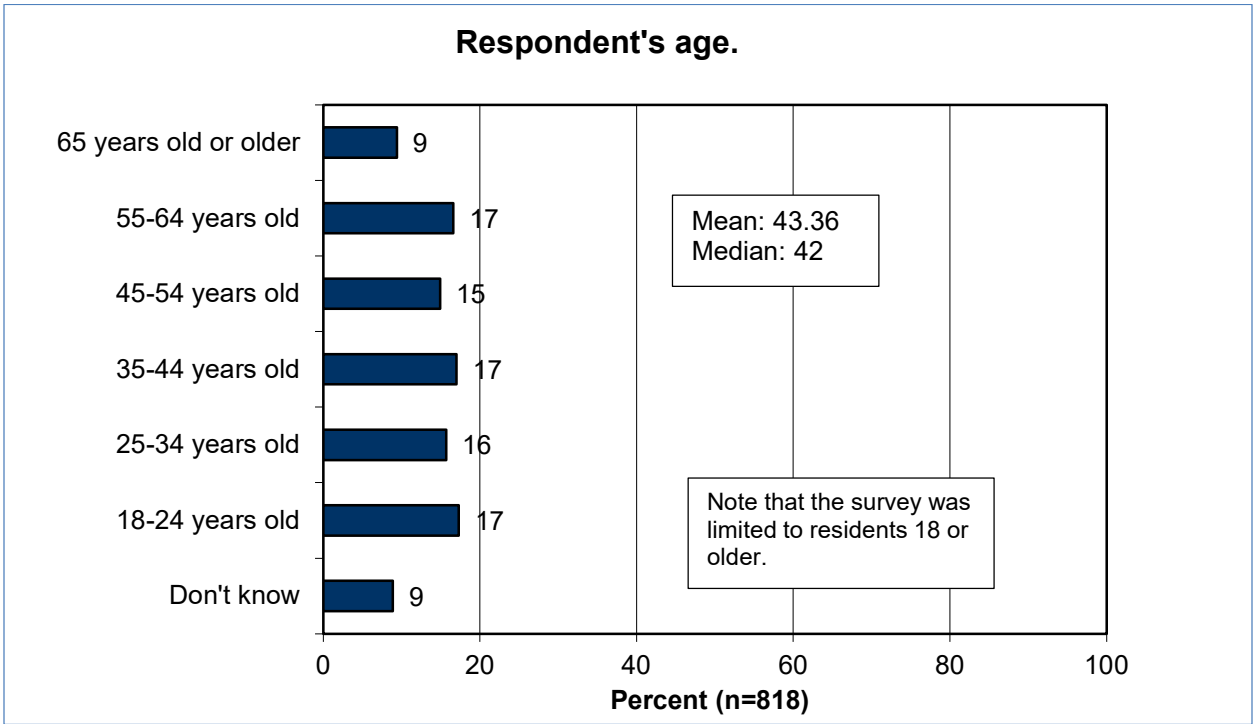


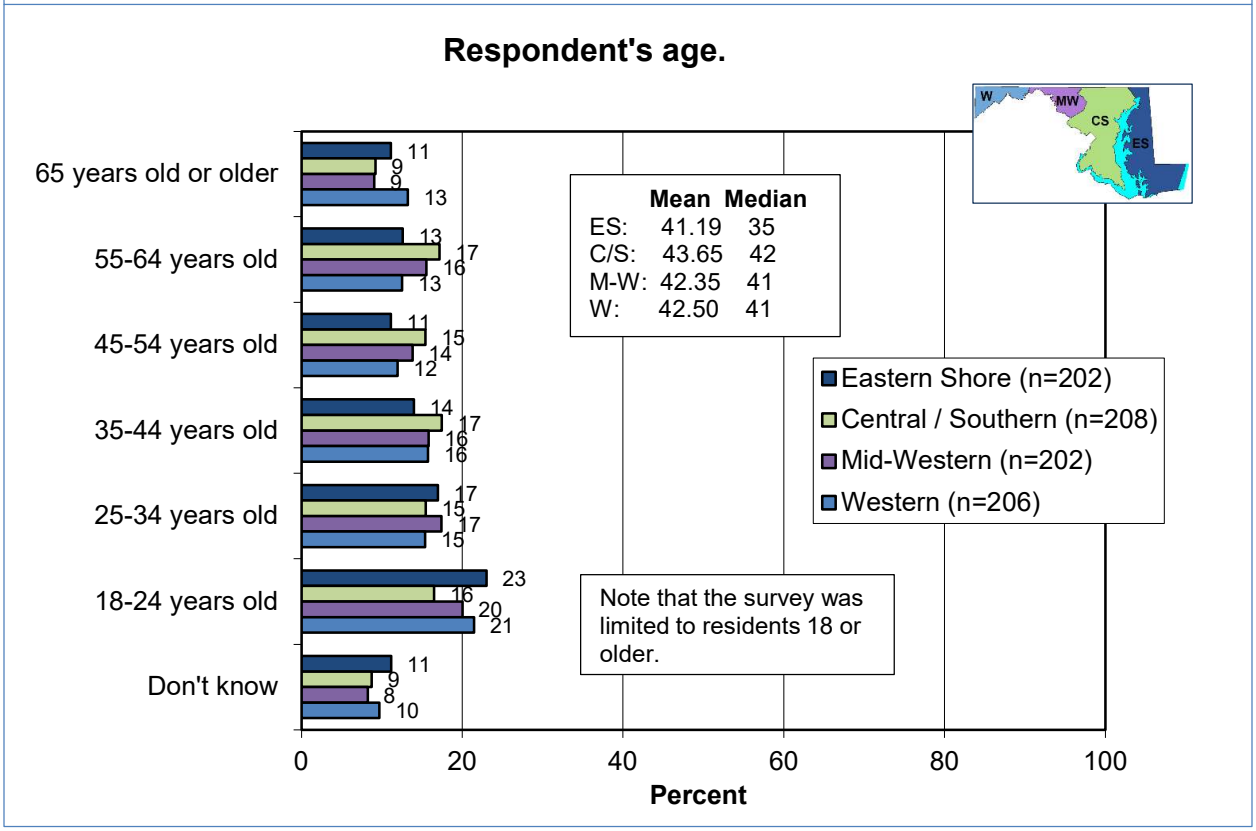
Would you consider purchasing black bear products from the Maryland Department of Natural Resources? (Asked of those who are not aware that Maryland Department of Natural Resources offers black bear collectible stamps and shirts for purchase.)

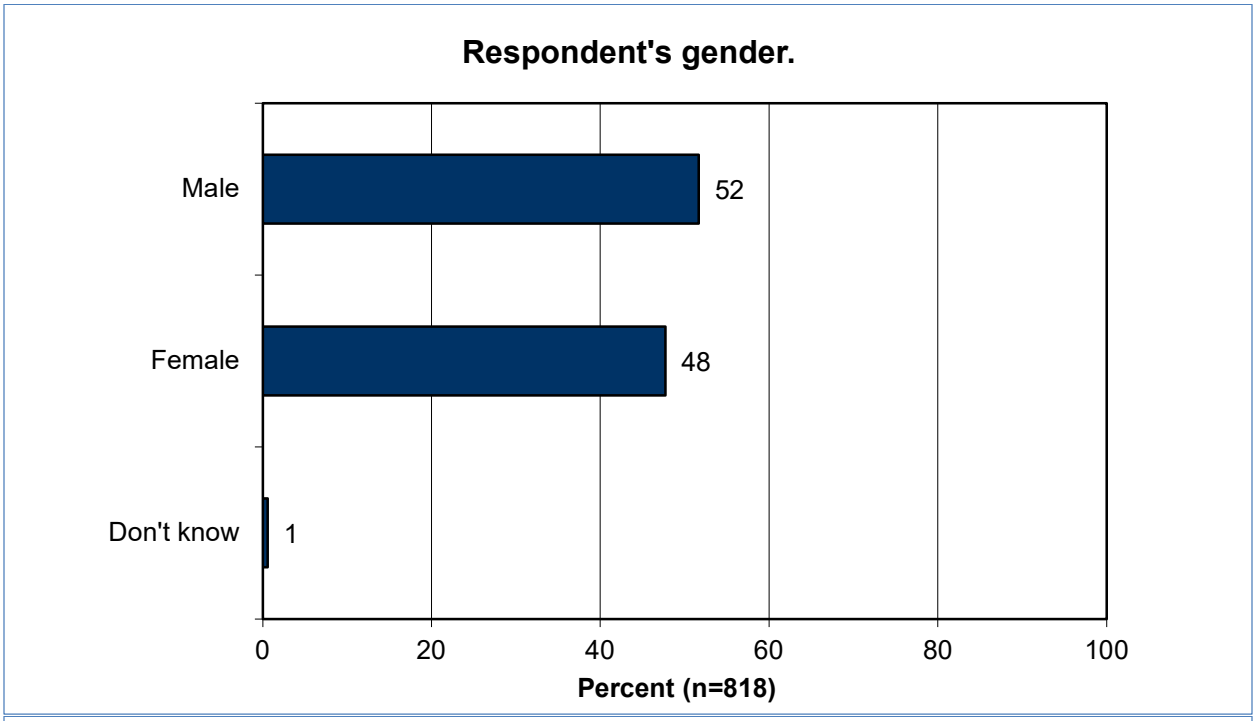


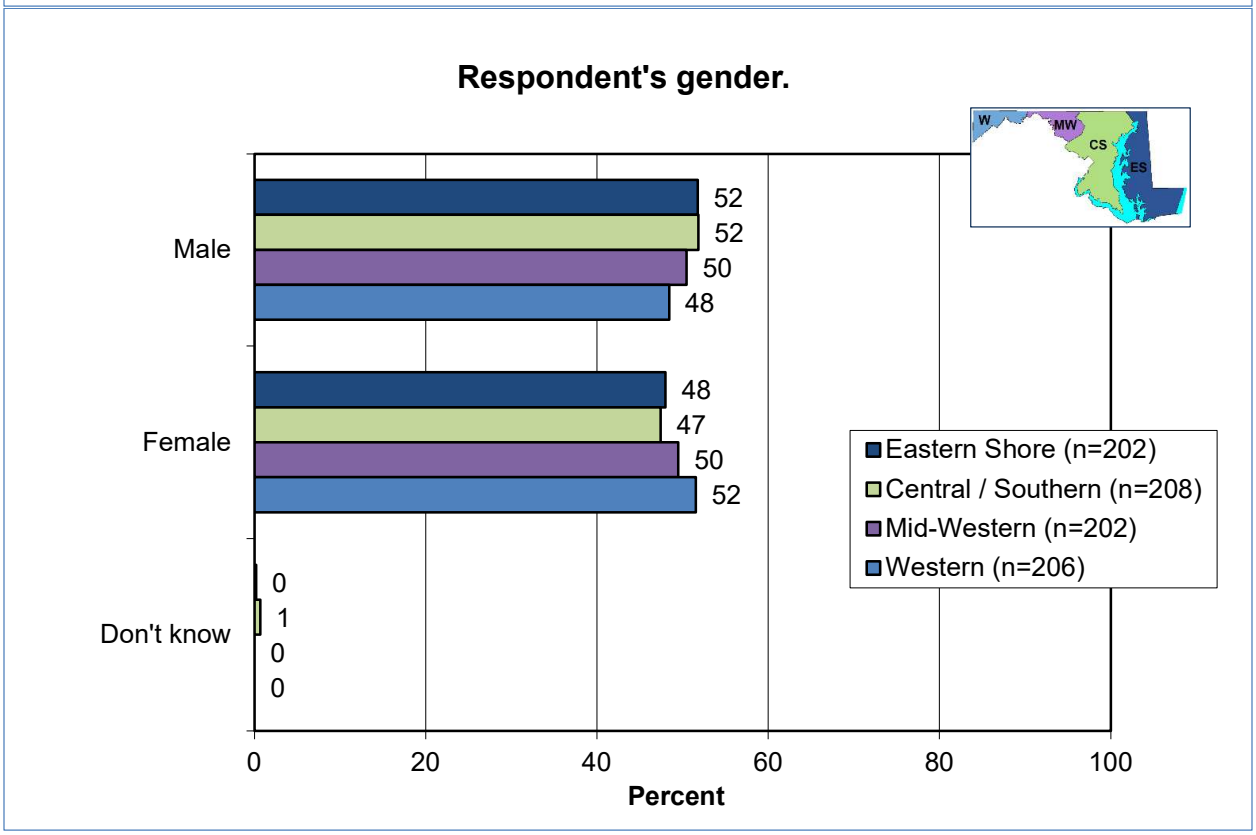
DEMOGRAPHIC CHARACTERISTICS

Demographic data were collected primarily for crosstabulations, but the results are shown here directly. Data include age, gender, participation in outdoor recreation, type of residential area (urban–rural continuum), and county of residence.

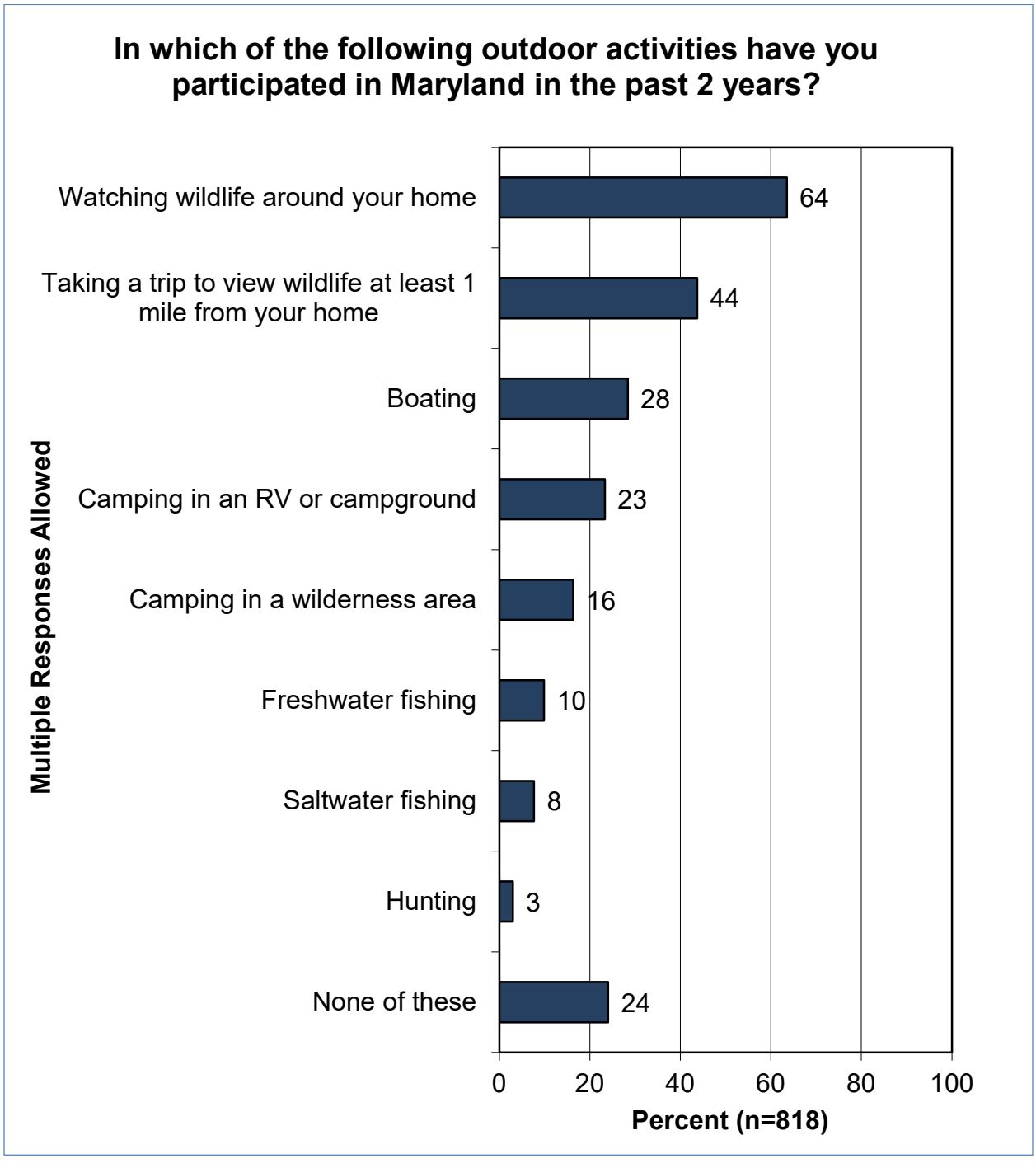




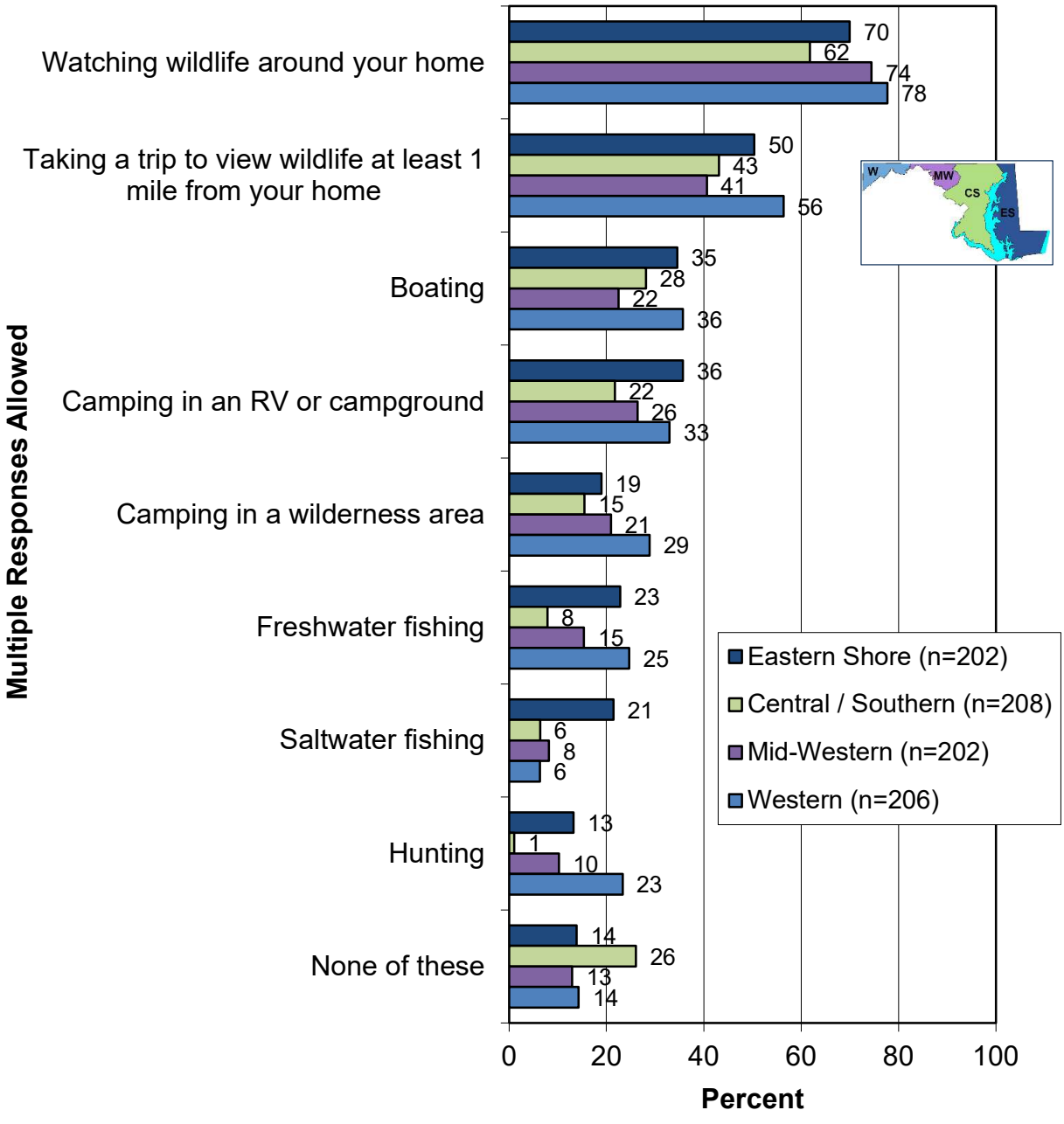

Respondent's gender.
Male
Female
Don't know
52
48
1
0
20
40
60
80
100
Percent (n=818)


Respondent's gender.
W
MW
CS
ES
Male
Female
Don't know
52
52
50
48
48
47
50
52
0
1
0
0
Eastern Shore (n=202)
Central / Southern (n=208)
Mid-Western (n=202)
Western (n=206)
0
20
40
60
80
100
Percent

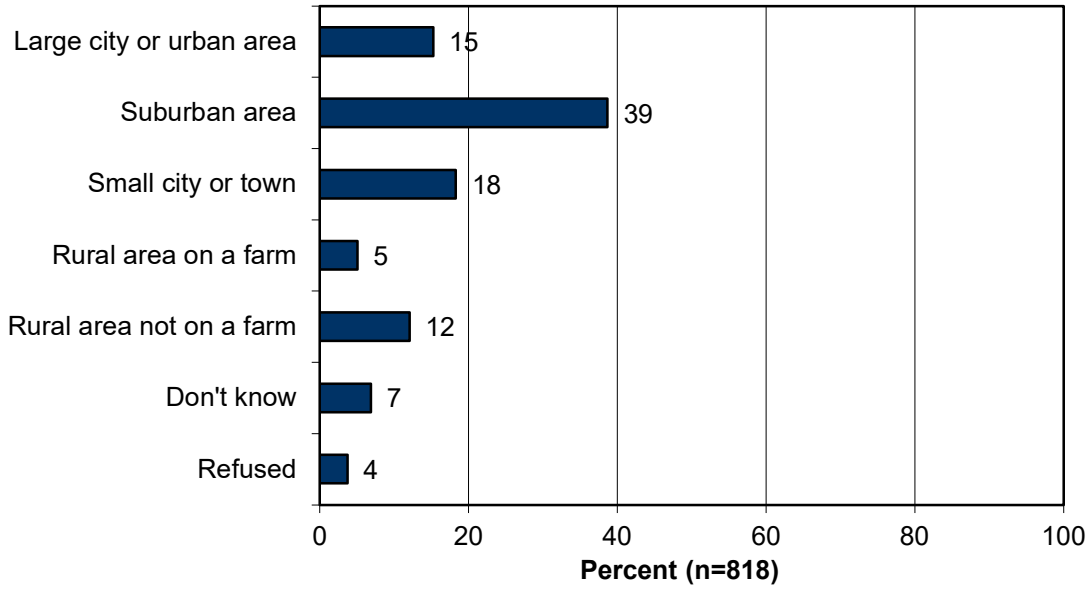
Note that residents who said they camped in a wilderness area might have a different interpretation of "wilderness area" than the DNR's interpretation.



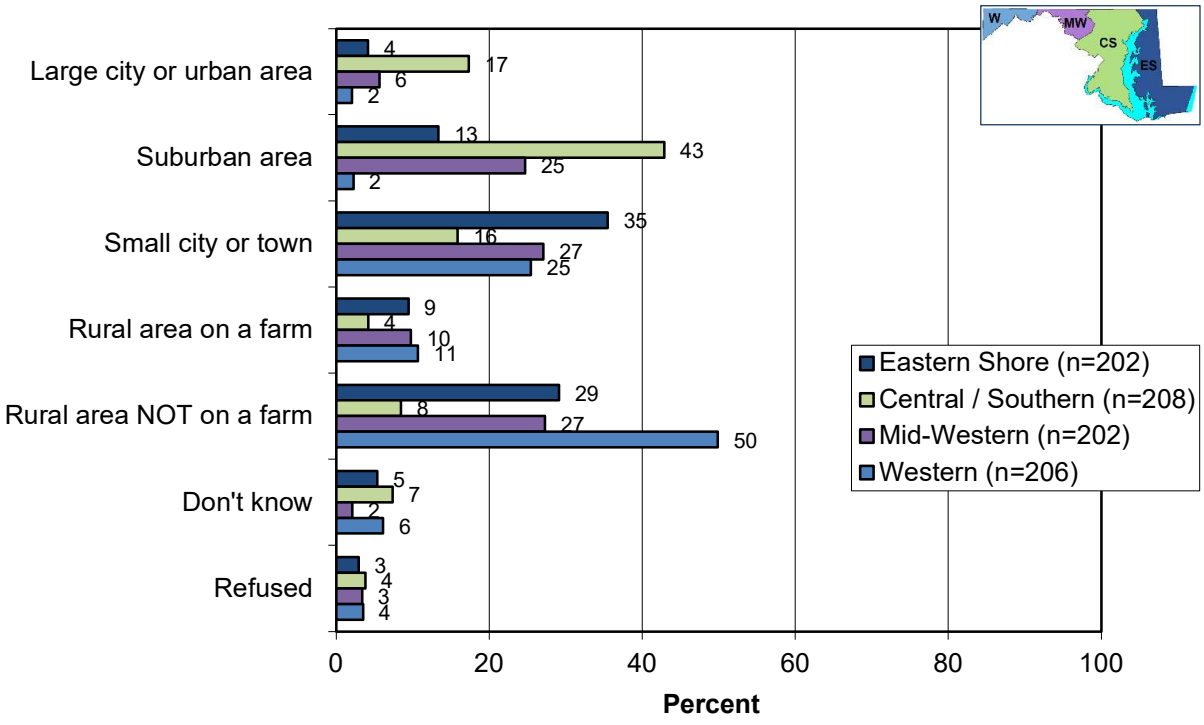
In which of the following outdoor activities have you participated in Maryland in the past 2 years?

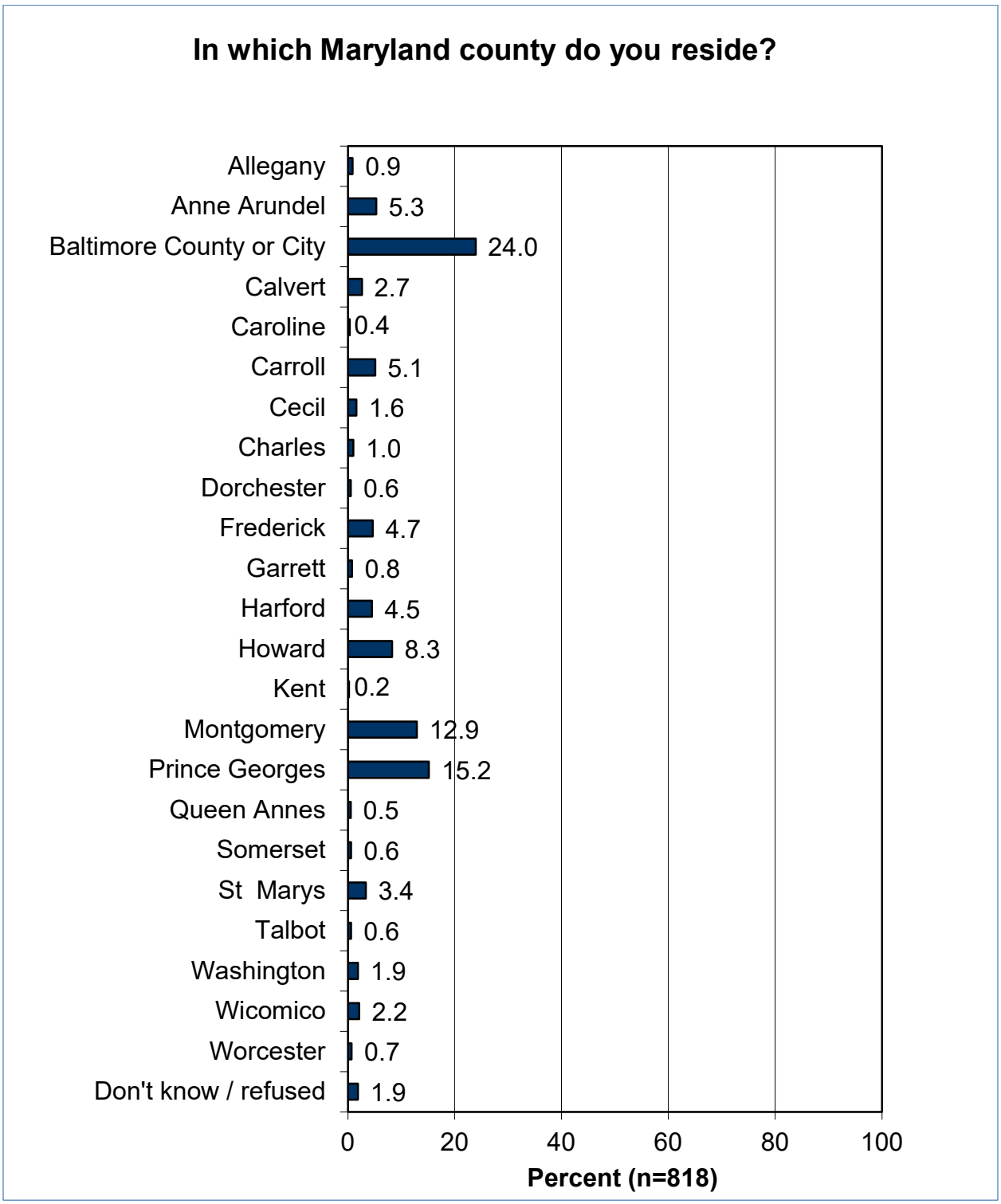


Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, or a rural area?



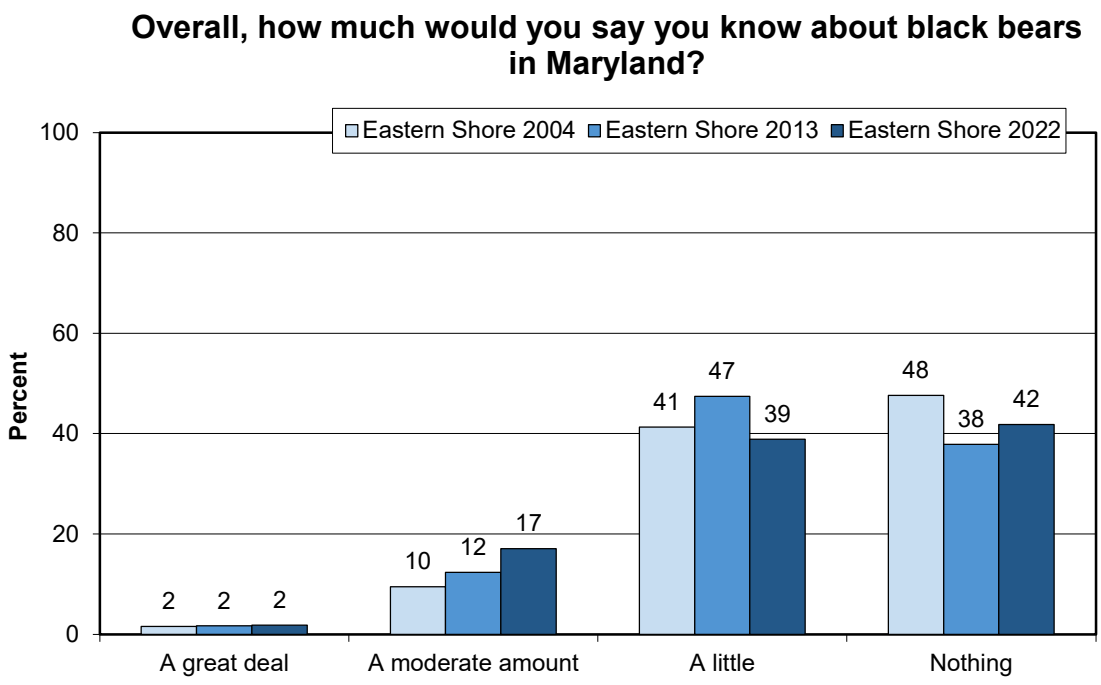
Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, or a rural area?

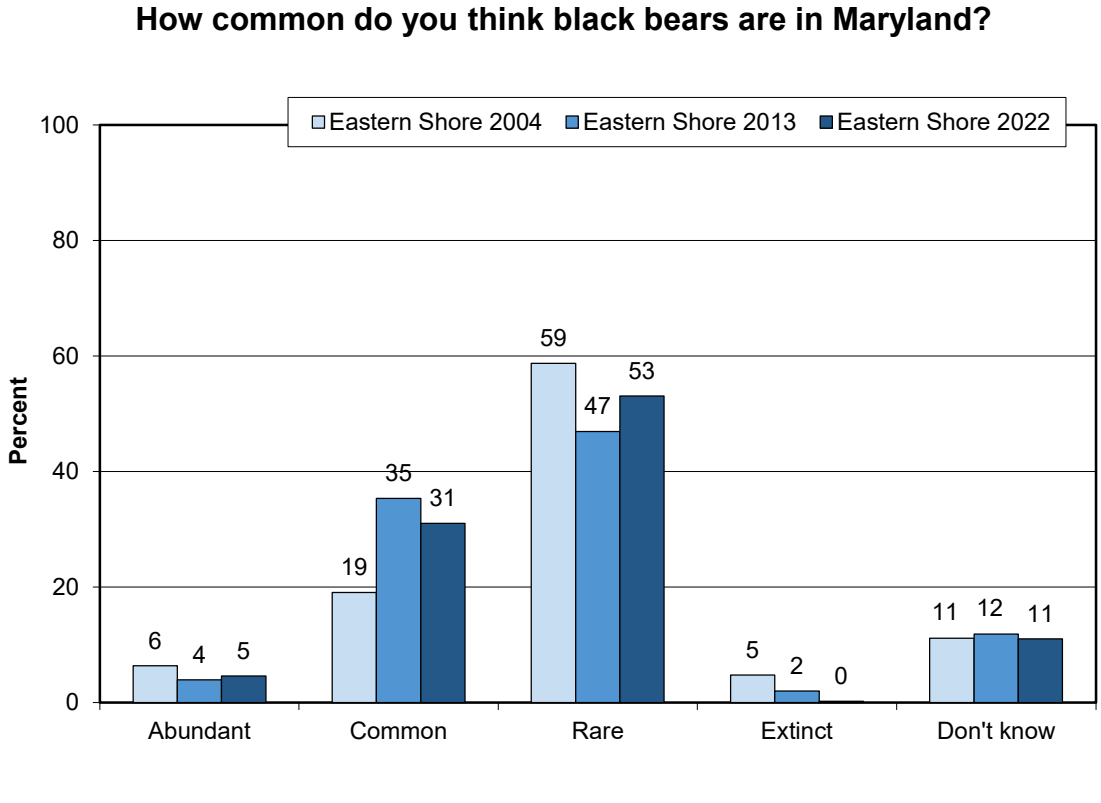



In which Maryland county do you reside?
Allegany 0.9
Anne Arundel 5.3
Baltimore County or City 24.0
Calvert 2.7
Caroline 0.4
Carroll 5.1
Cecil 1.6
Charles 1.0
Dorchester 0.6
Frederick 4.7
Garrett 0.8
Harford 4.5
Howard 8.3
Kent 0.2
Montgomery 12.9
Prince Georges 15.2
Queen Annes 0.5
Somerset 0.6
St Marys 3.4
Talbot 0.6
Washington 1.9
Wicomico 2.2
Worcester 0.7
Don't know / refused 1.9
0
20
40
60
80
100
Percent (n=818)

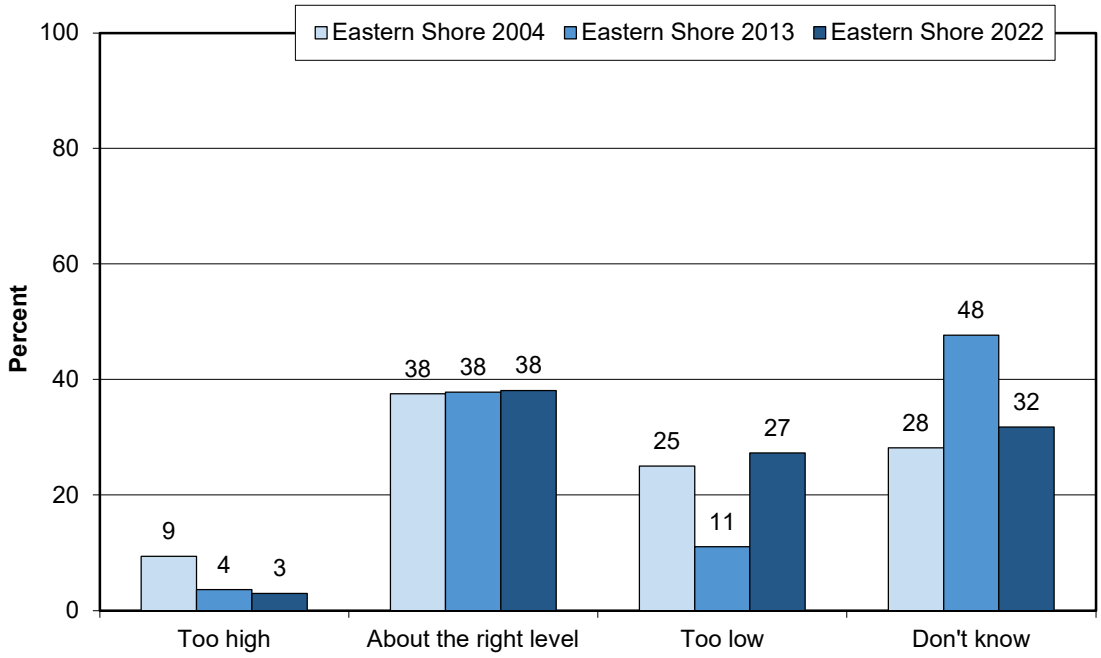
APPENDIX: REGIONAL TRENDS

EASTERN SHORE

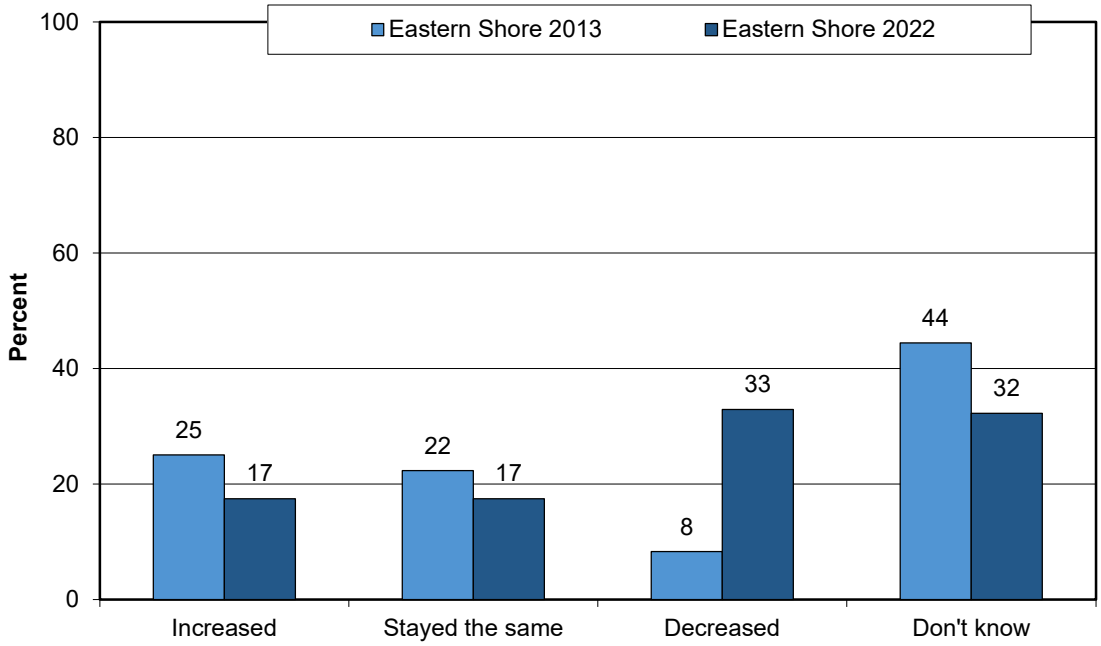




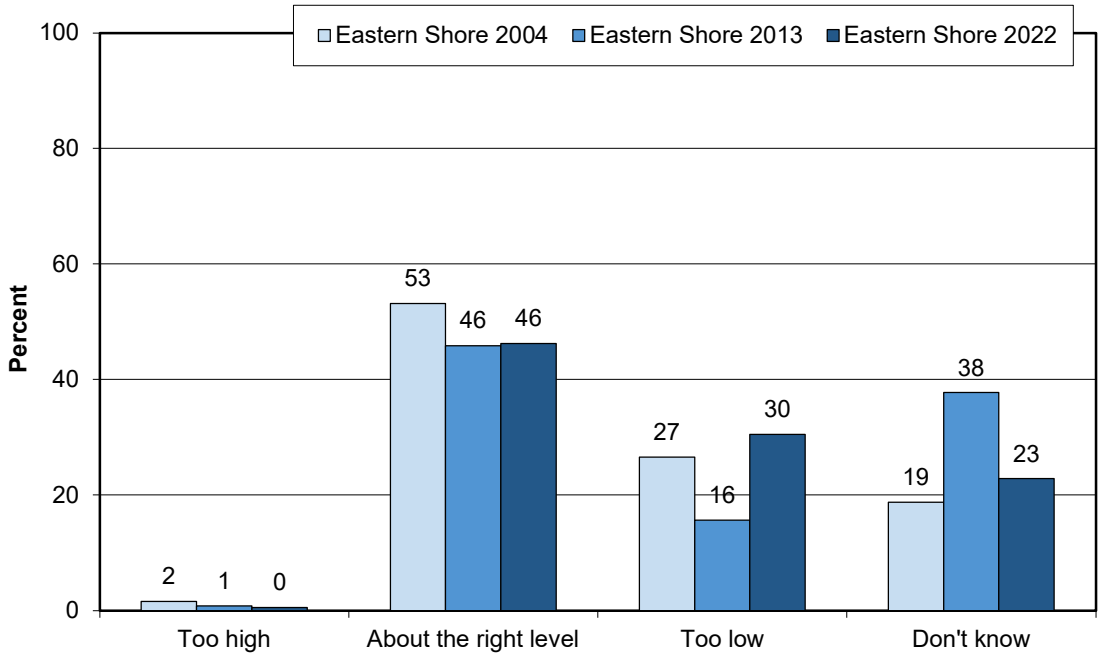
Overall, would you say the black bear population in Maryland is too high, too low, or about the right level?



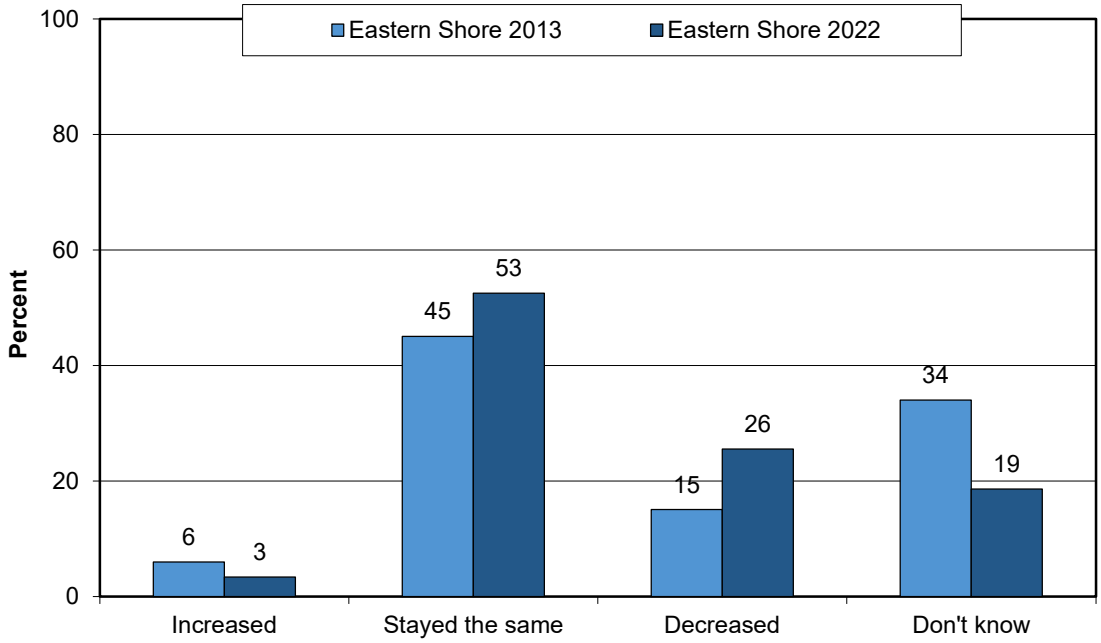
Would you say the black bear population in Maryland has increased, stayed about the same, or decreased over the past 5 years?

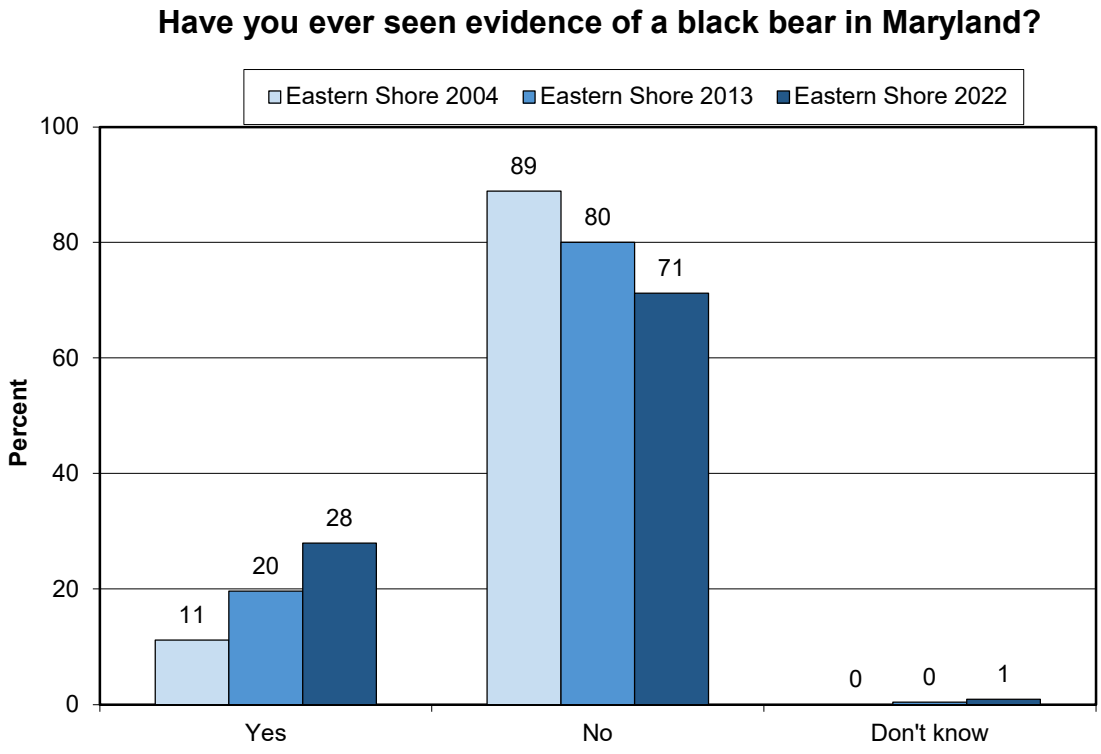


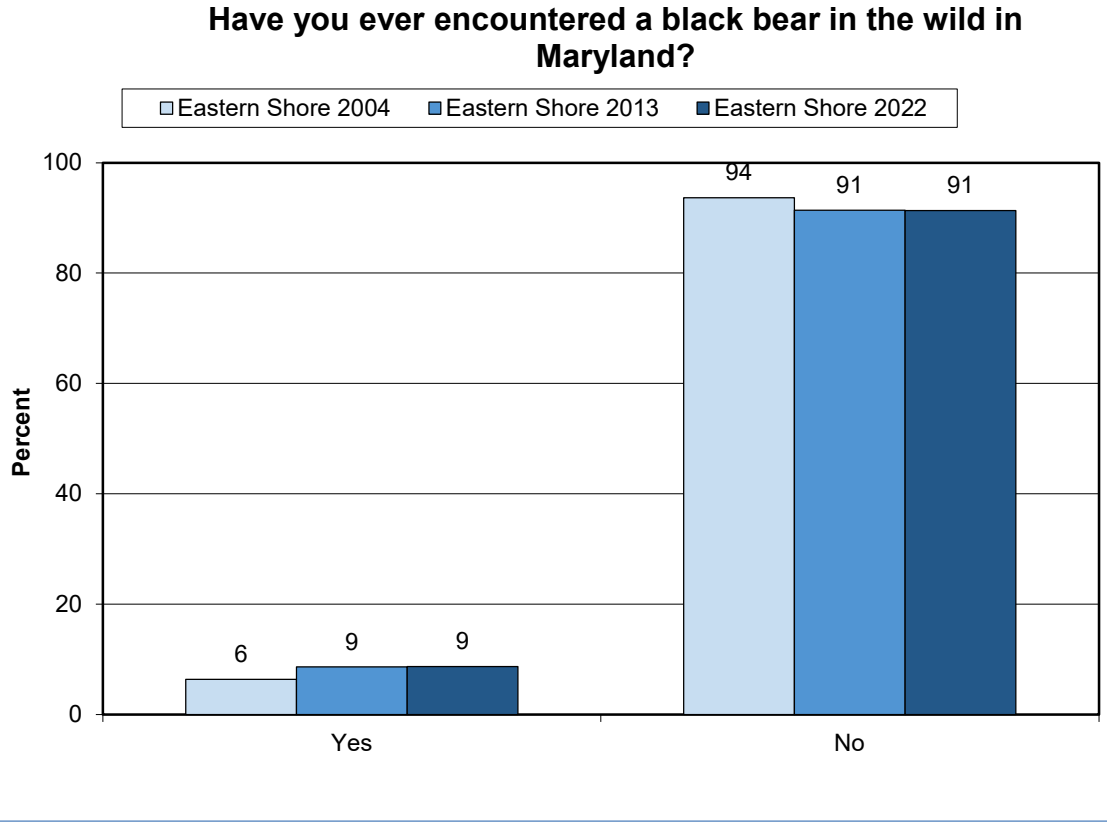
Overall, would you say the black bear population in your county is too high, too low, or about the right level?



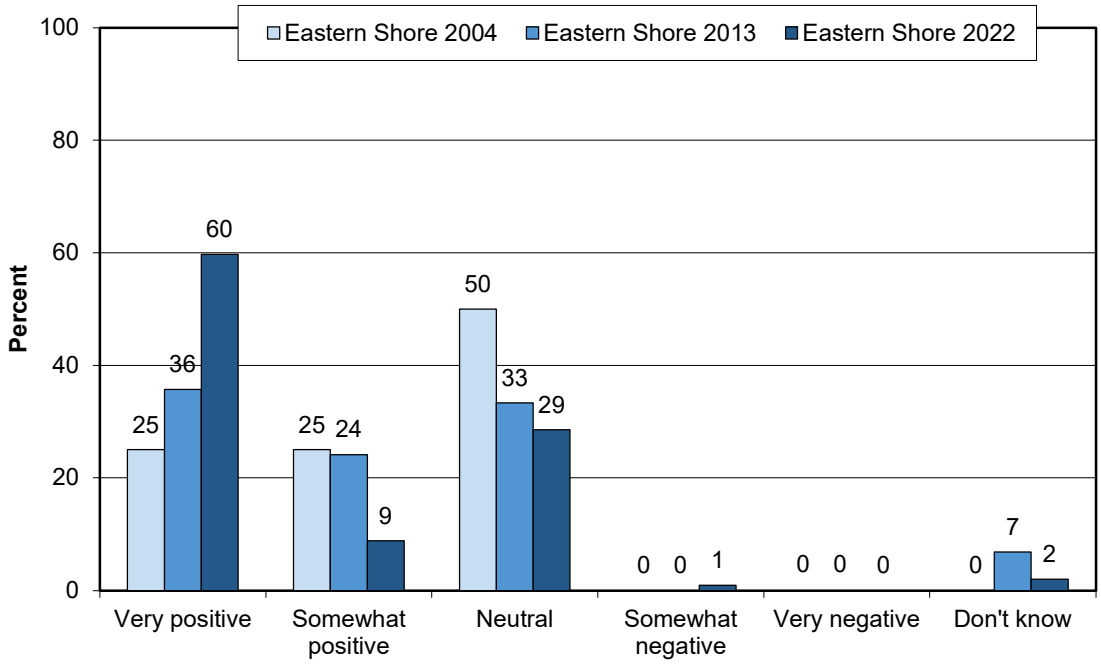
Would you say the black bear population in your county has increased, stayed about the same, or decreased over the past 5 years?



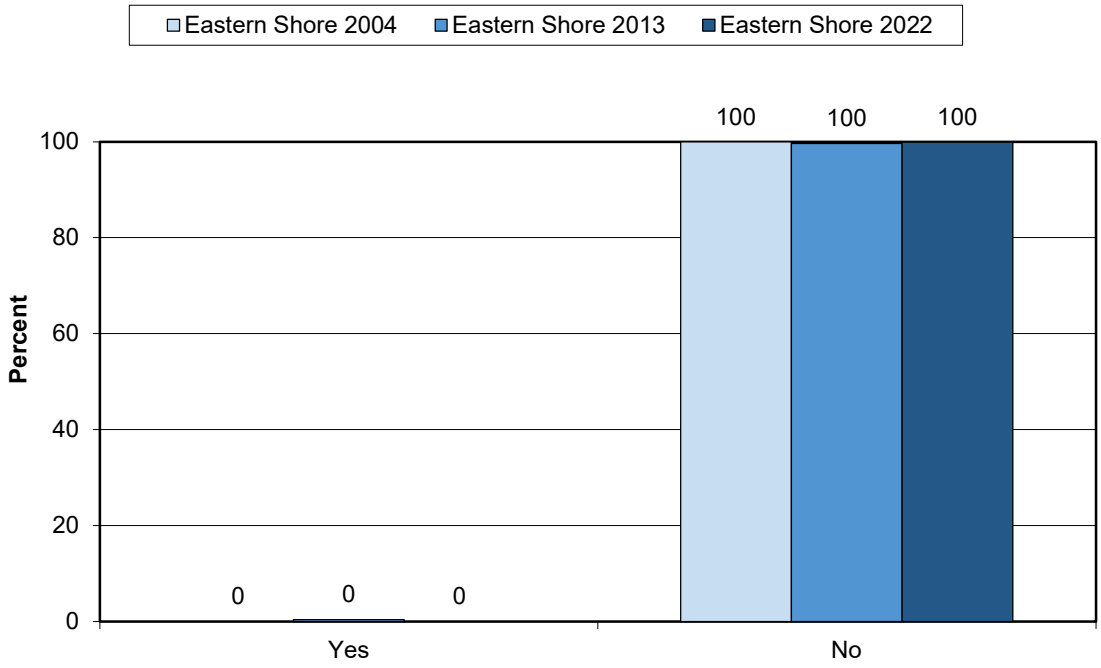

Have you ever seen evidence of a black bear in Maryland?
Eastern Shore 2004
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
11
20
28
89
80
71
0
0
1
Yes
No
Don't know


Have you ever encountered a black bear in the wild in Maryland?
Eastern Shore 2004
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
6
9
9
94
91
91
Yes
No

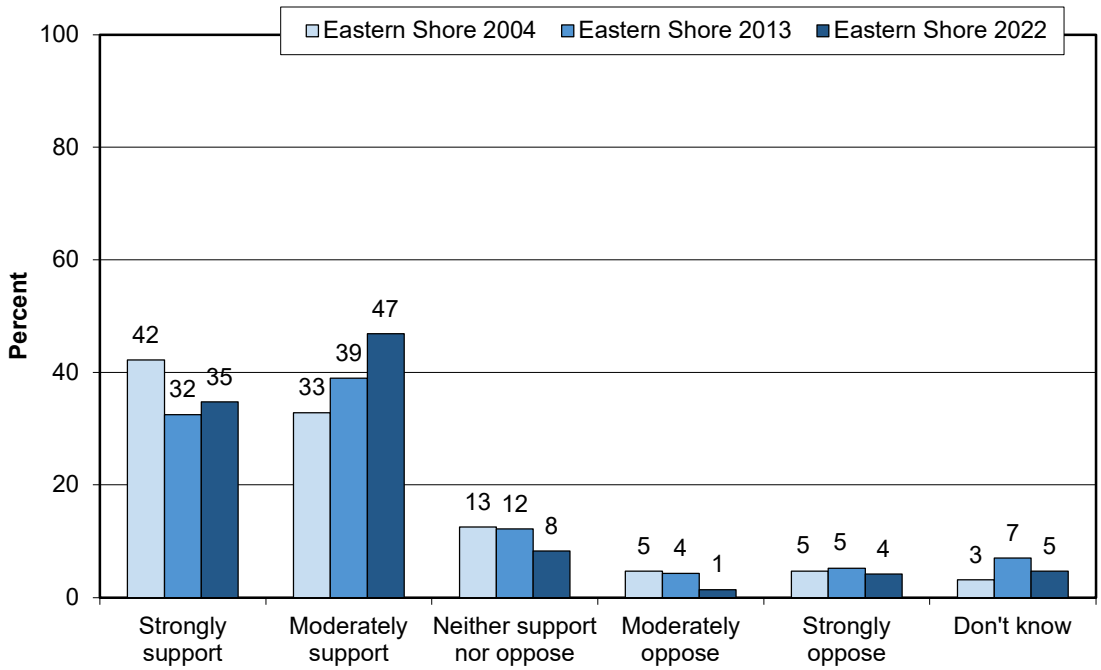
When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who encountered a black bear.)



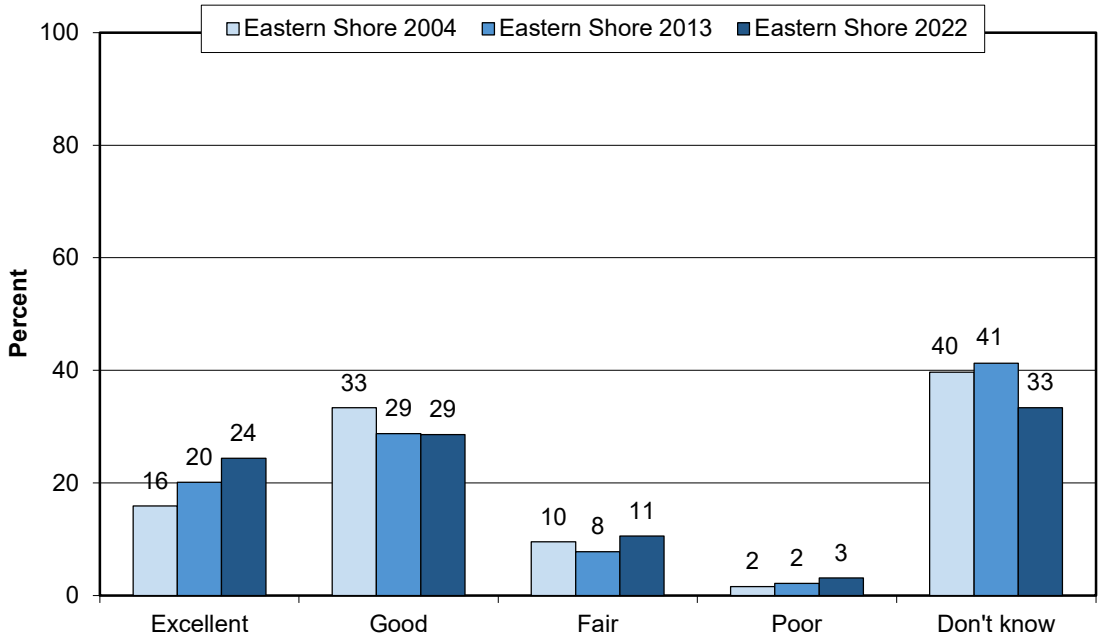
Have you had any problems with black bears within the past two years?



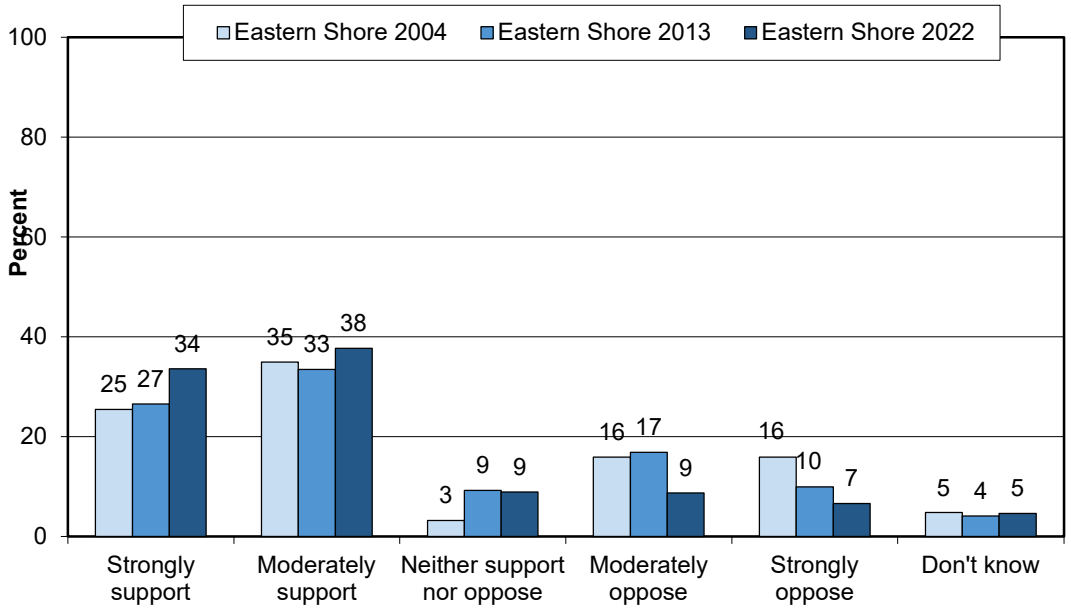
In general, do you support or oppose having black bears in Maryland?



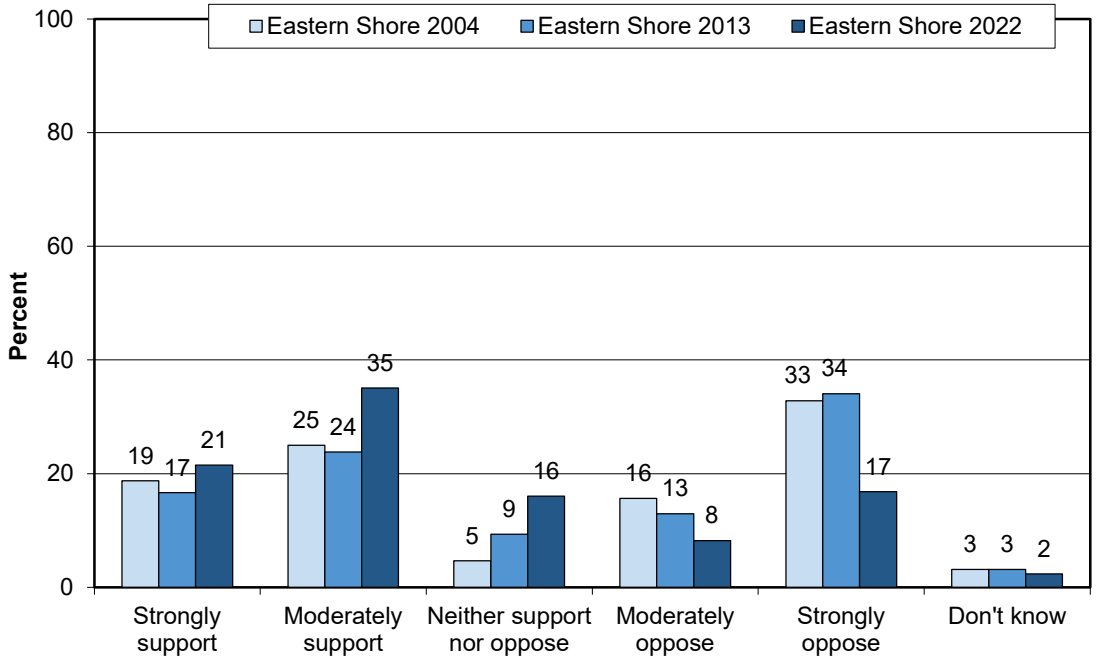
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?



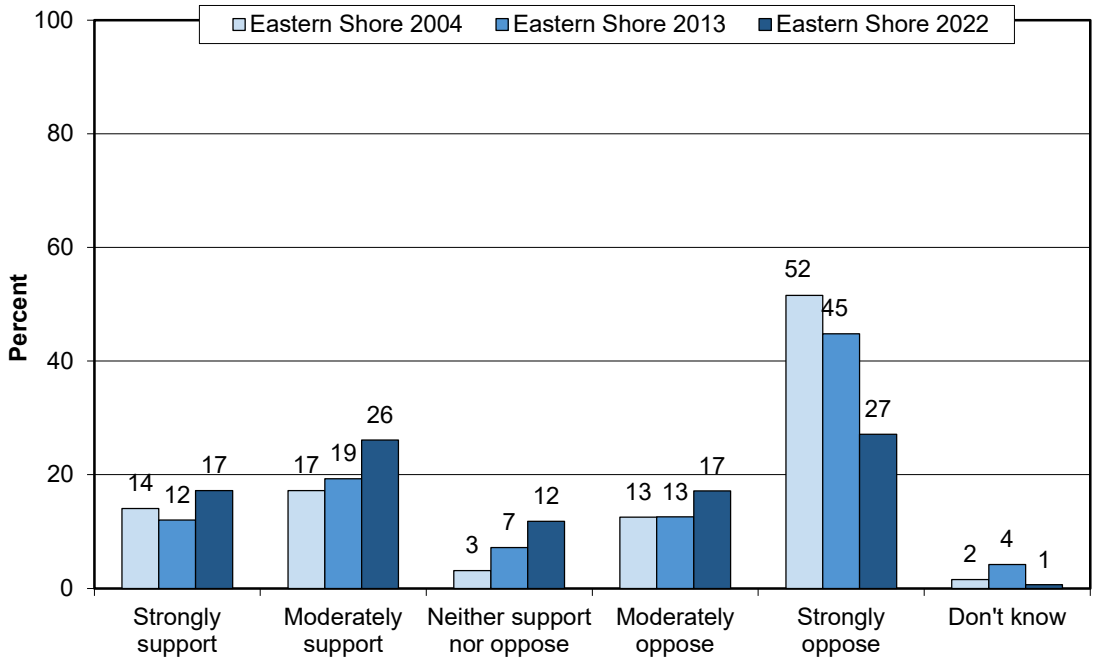
For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?



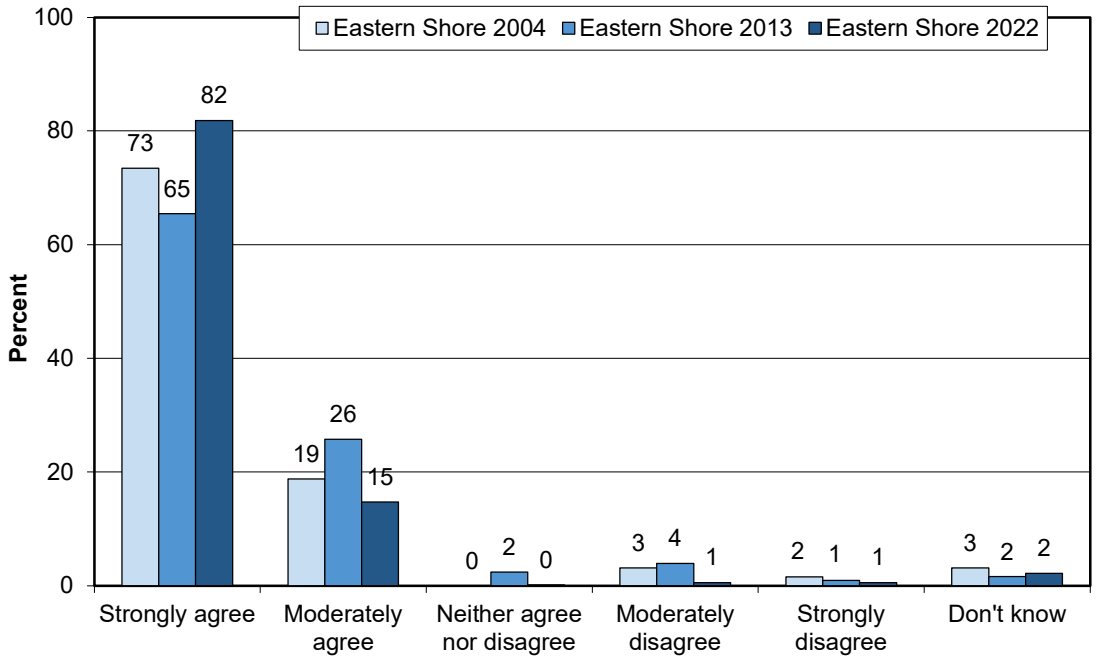
Would you support or oppose having black bears in your county?



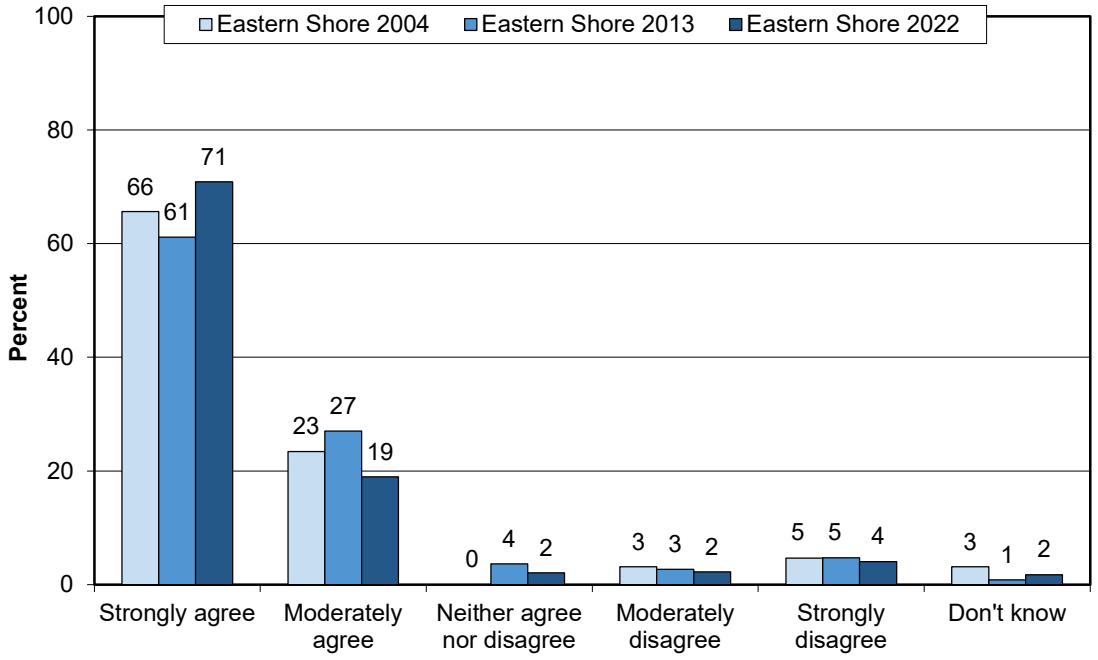
Would you support or oppose having black bears within 1/2 mile of your home?



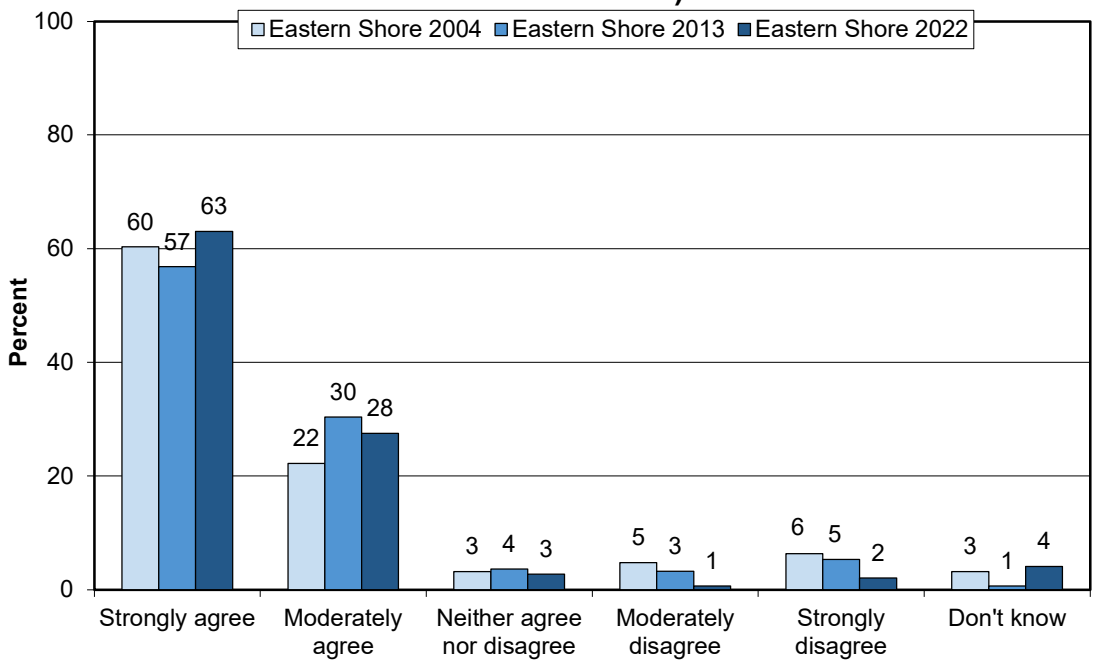
Preserving habitat on which black bears depend is important. (Do you agree or disagree with this statement?)



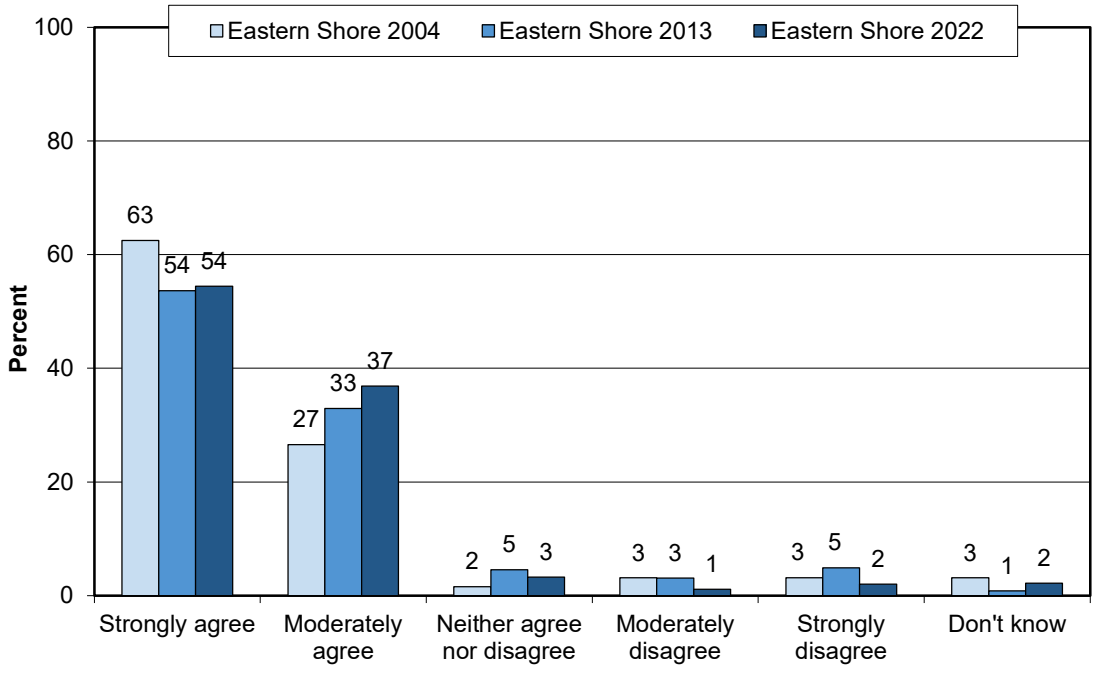
Black bears should be preserved in Maryland for future generations. (Do you agree or disagree with this statement?)



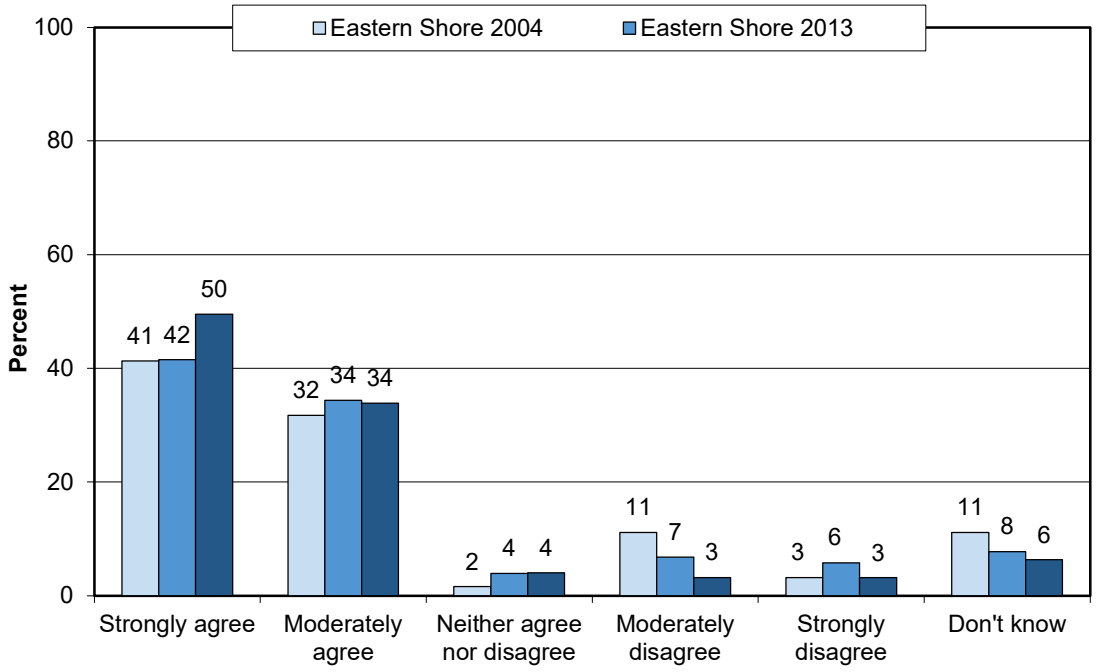
Although I may never see one, I derive satisfaction just knowing black bears exist in Maryland. (Do you agree or disagree with this statement?)

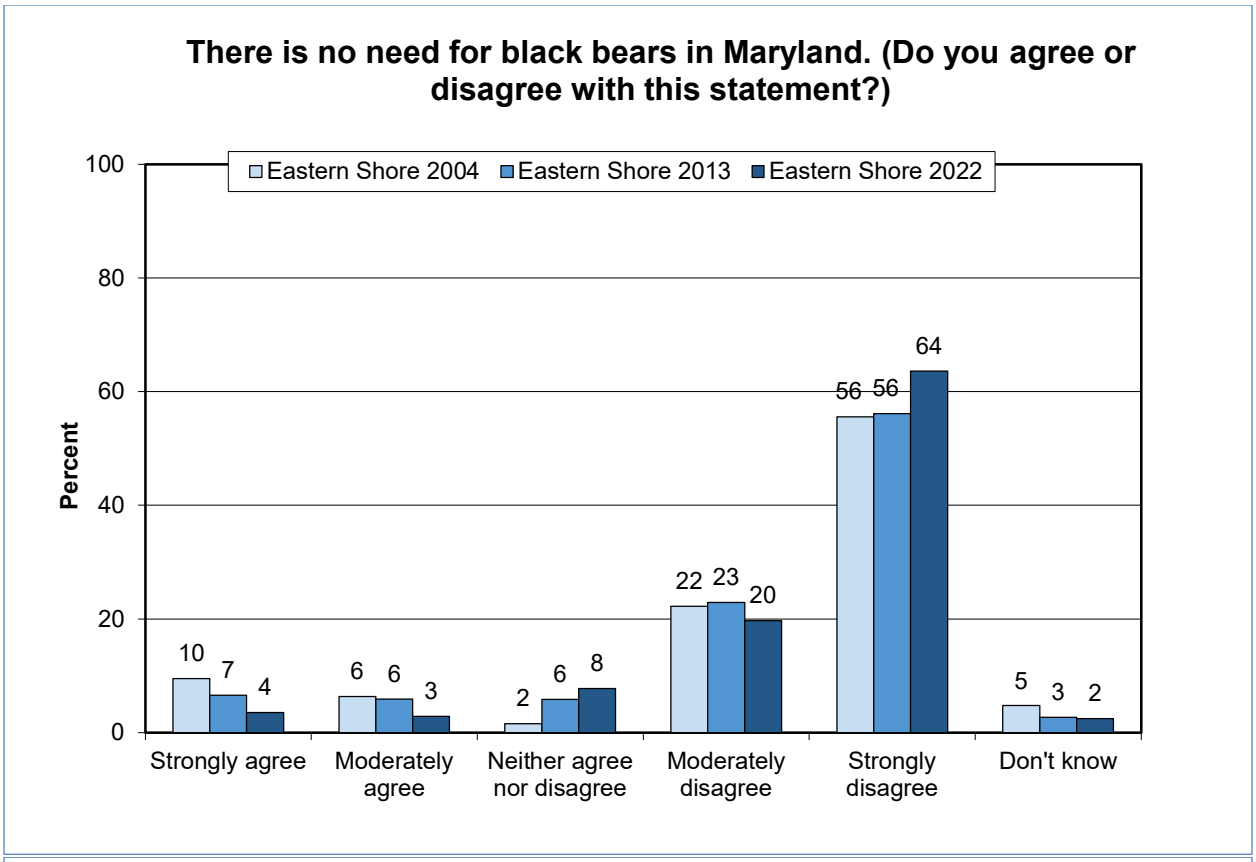


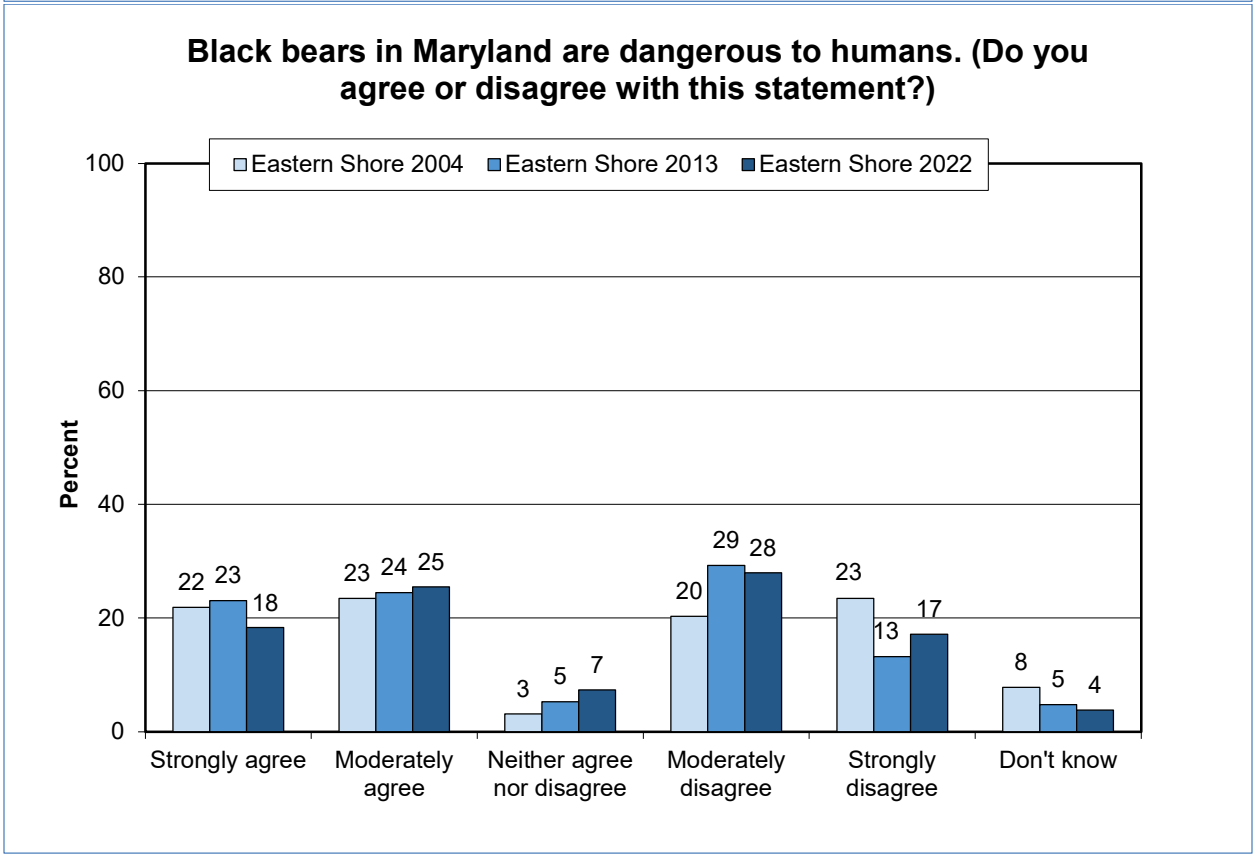
Black bears have an inherent right to live in Maryland. (Do you agree or disagree with this statement?)



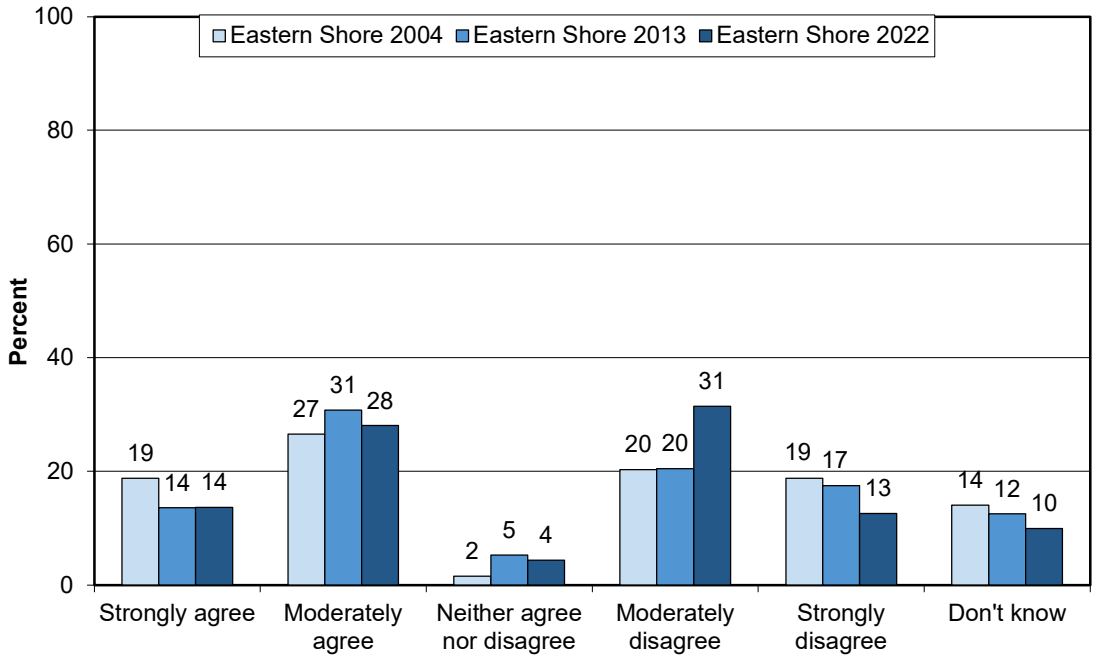
Black bears are an important and essential part of Maryland's ecosystem. (Do you agree or disagree with this statement?)



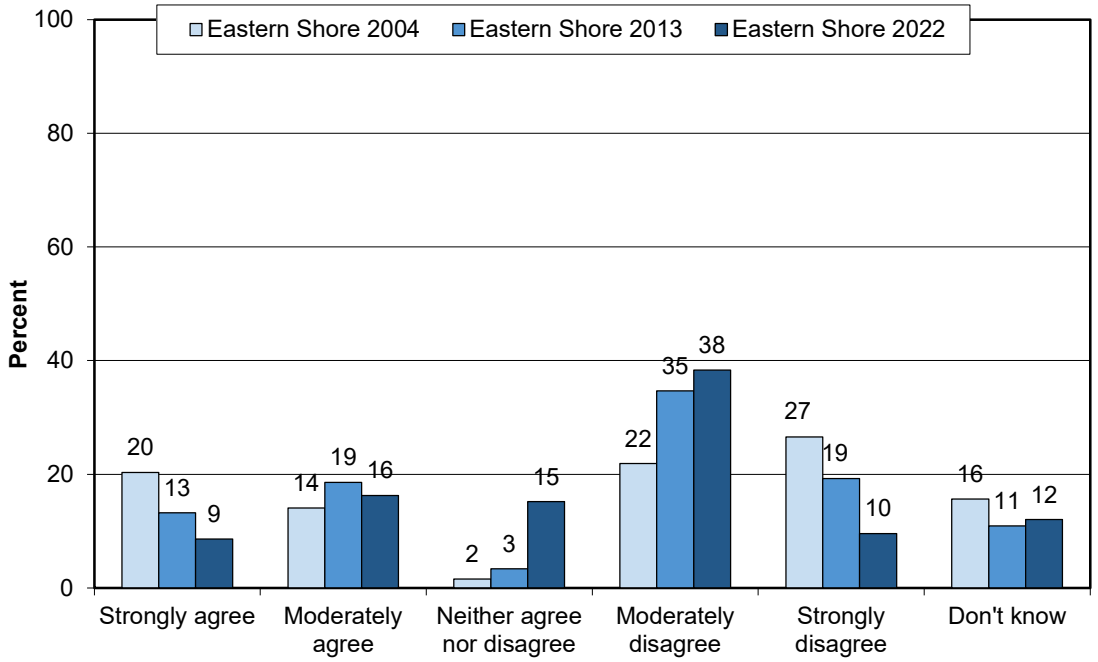

There is no need for black bears in Maryland. (Do you agree or disagree with this statement?)
Eastern Shore 2004
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
10 7 4
6 6 3
2 6 8
22 23 20
56 56 64
5 3 2
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know


Black bears in Maryland are dangerous to humans. (Do you agree or disagree with this statement?)
Eastern Shore 2004
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
22 23 18
23 24 25
3 5 7
20 29 28
23 13 17
8 5 4
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

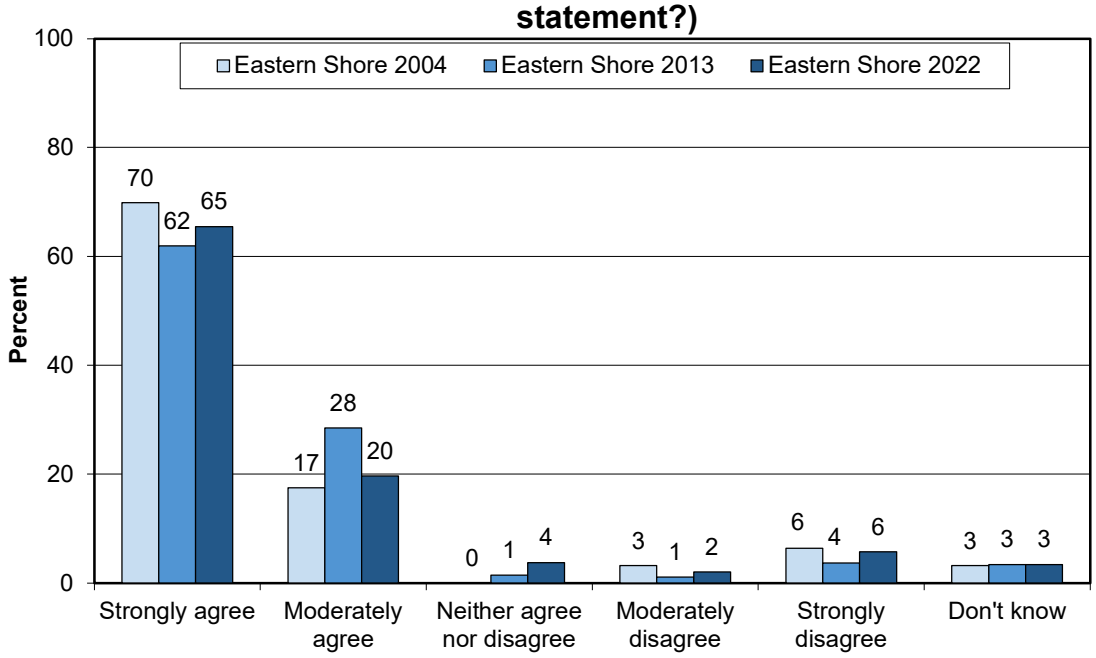
Black bears will frequently enter into populated areas in Maryland. (Do you agree or disagree with this statement?)



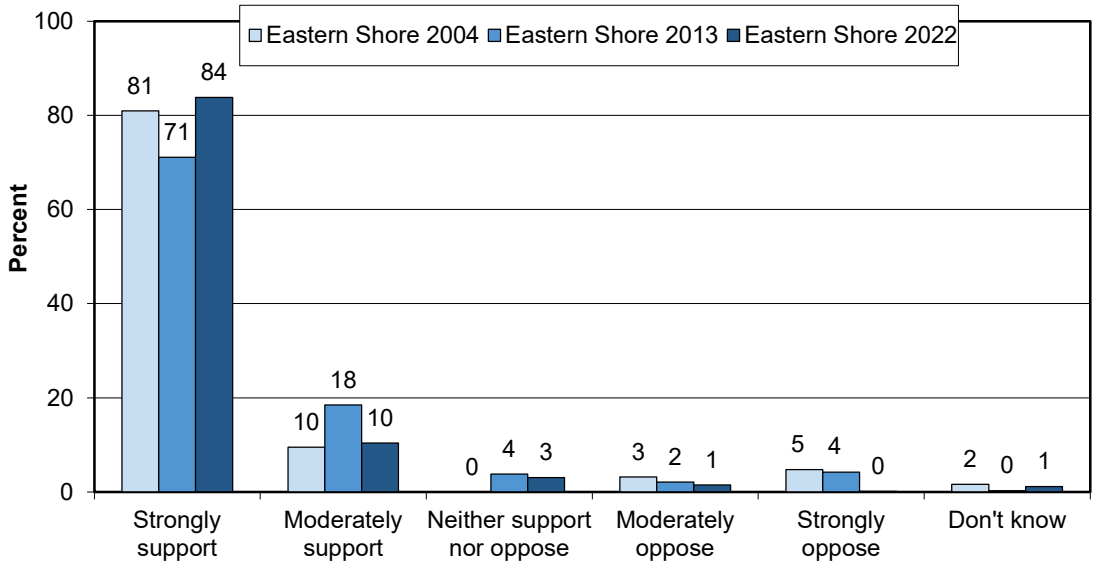
Black bears will kill many livestock and pets in Maryland. (Do you agree or disagree with this statement?)



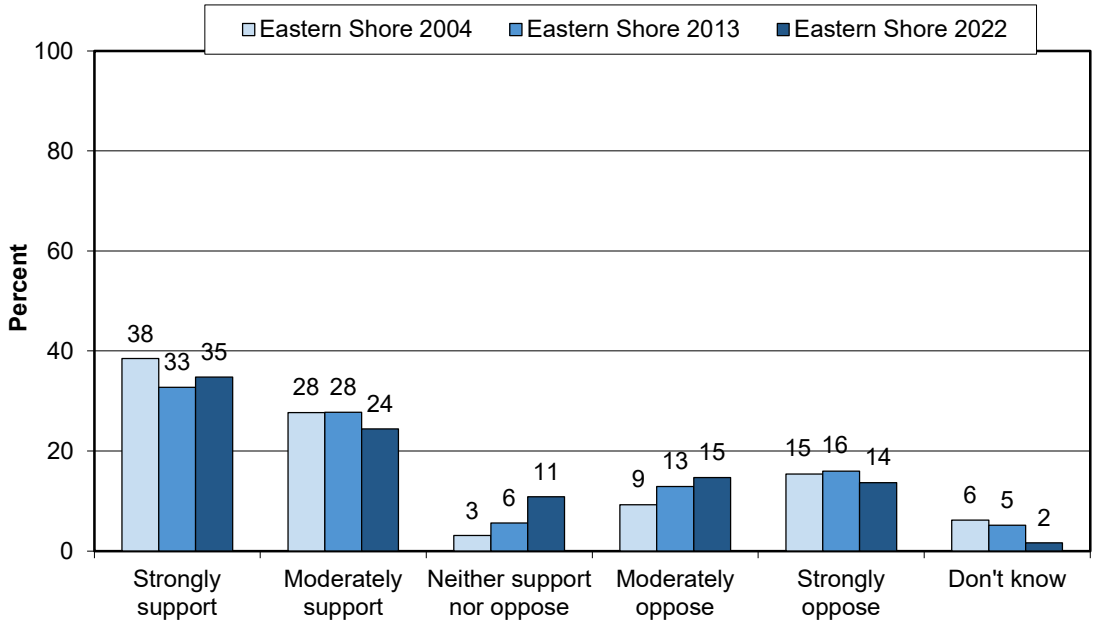
Most problems with black bears in Maryland can be prevented by taking a few simple precautions, such as using bear proof trash containers. (Do you agree or disagree with this statement?)



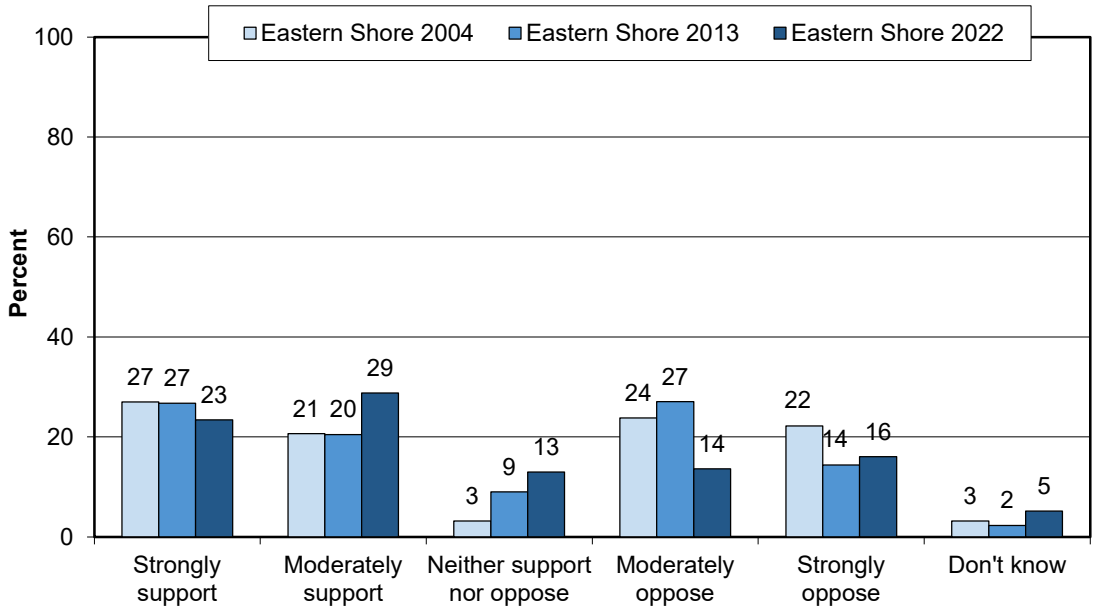
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas. (Would you support or oppose this?)



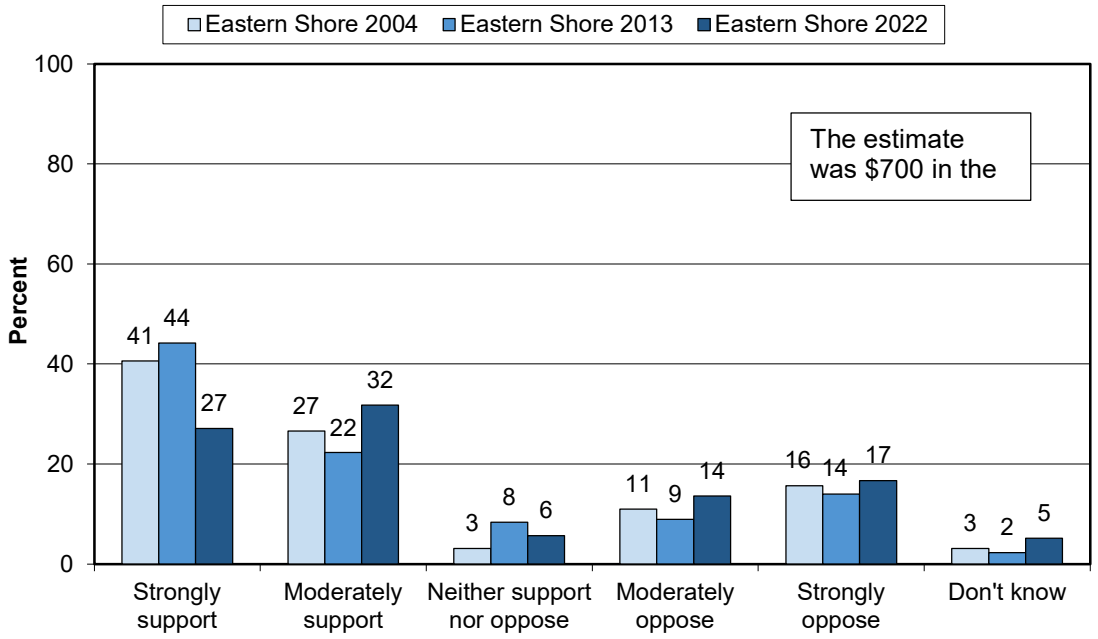
The use of electric fencing around small area bear attractants, such as beehives and aviaries. (Would you support or oppose this?)



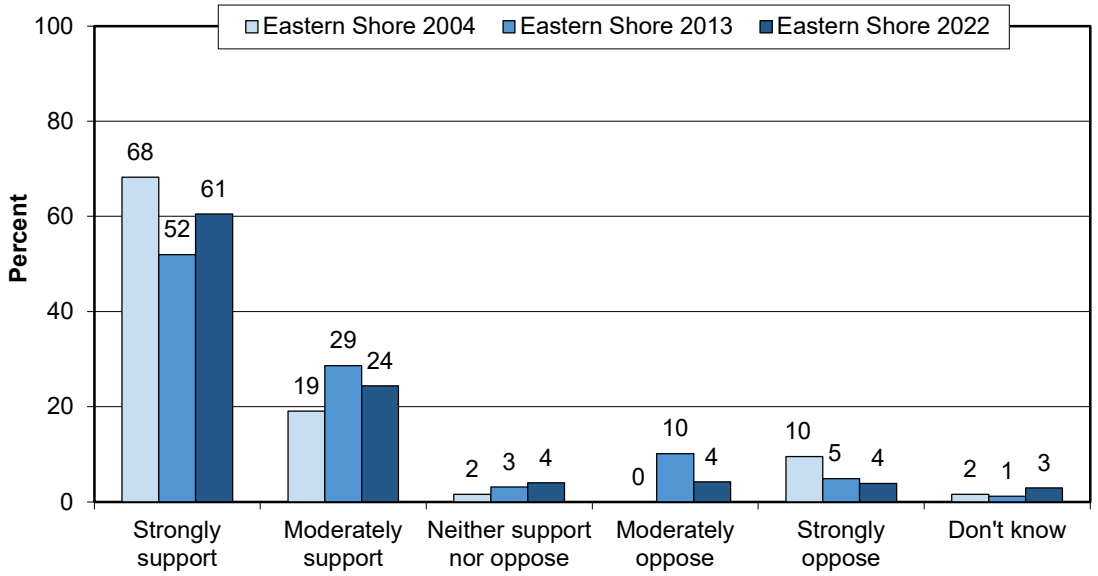
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities. (Would you support or oppose this?)



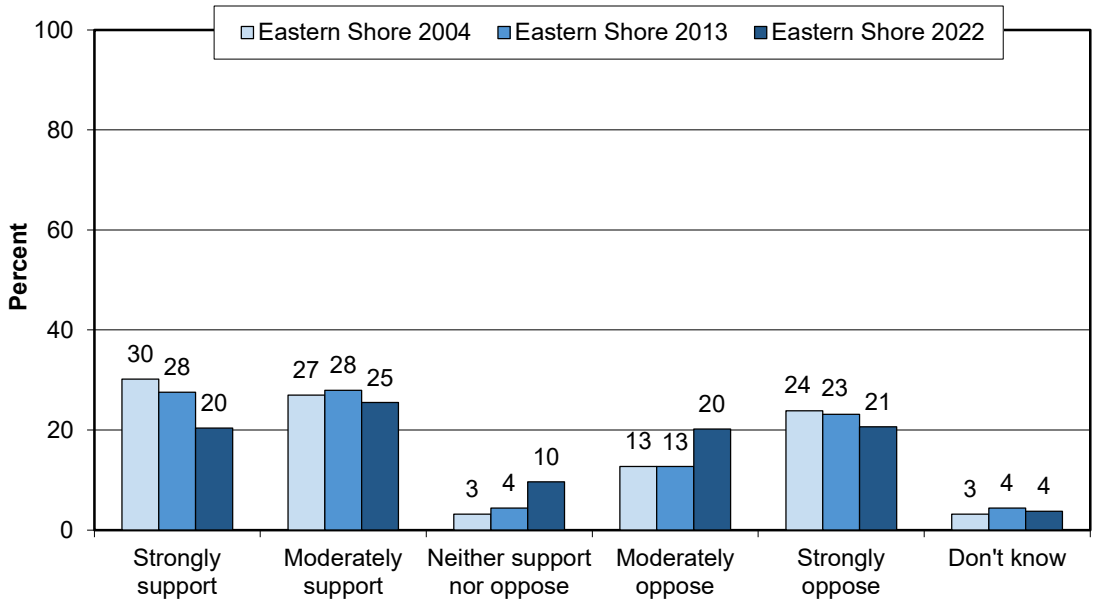
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more. (Would you support or oppose this?)



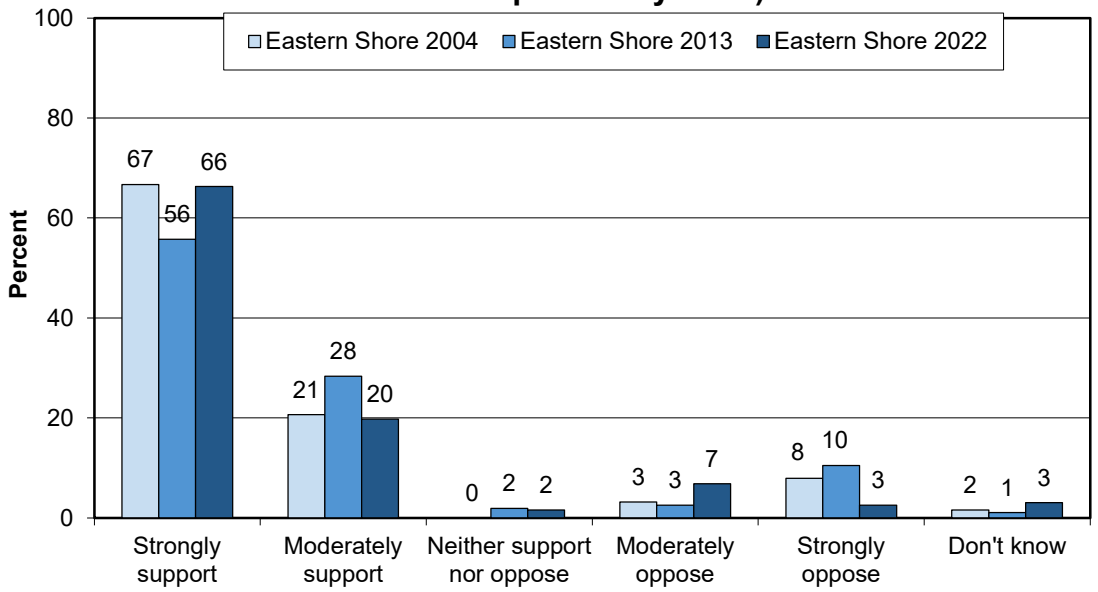
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



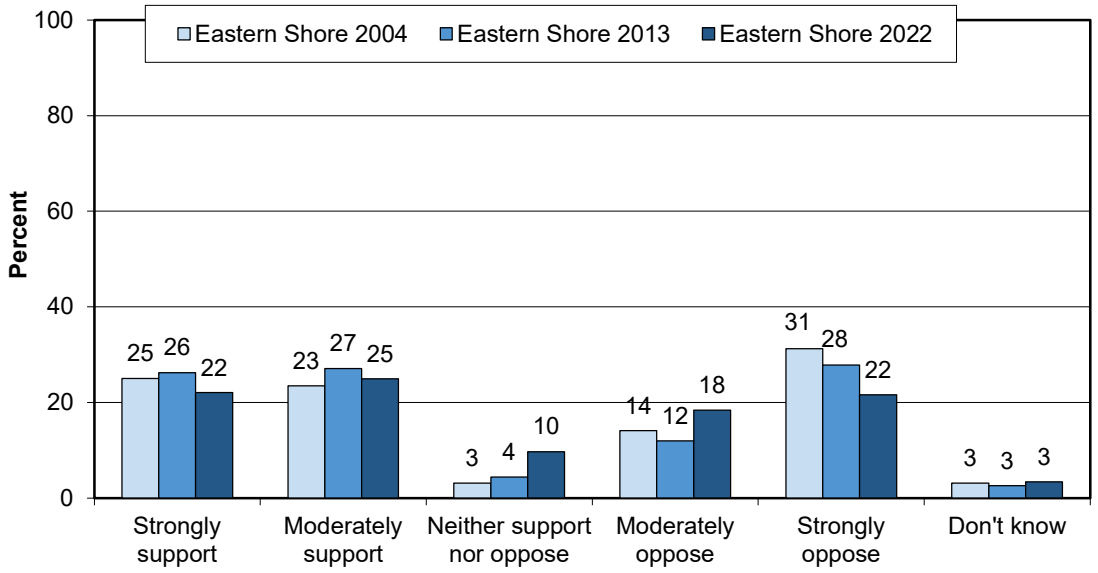
The DNR issuing depredation (kill) permits for black bears. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



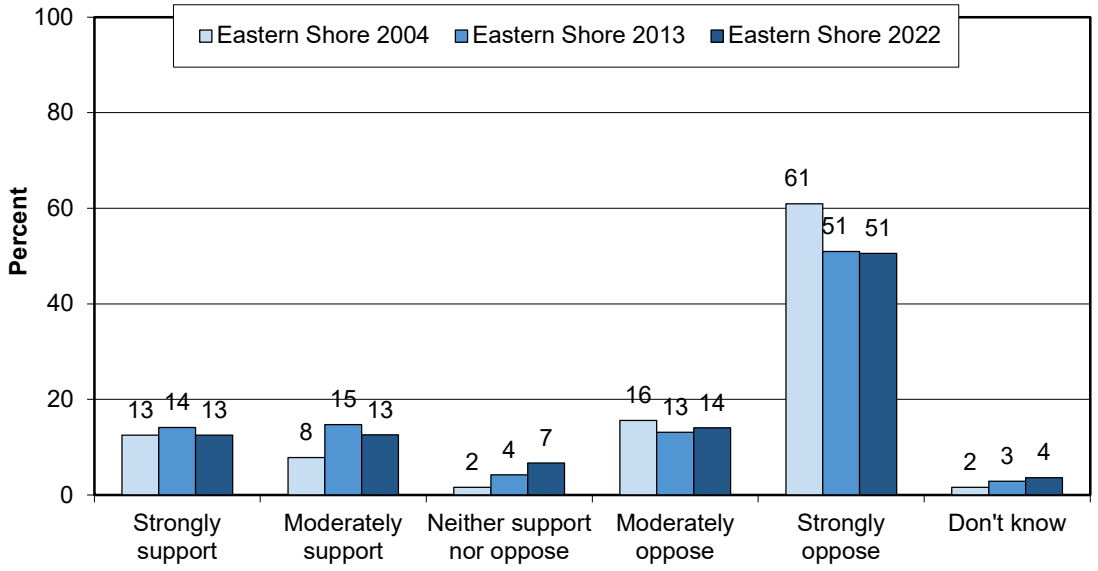
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)



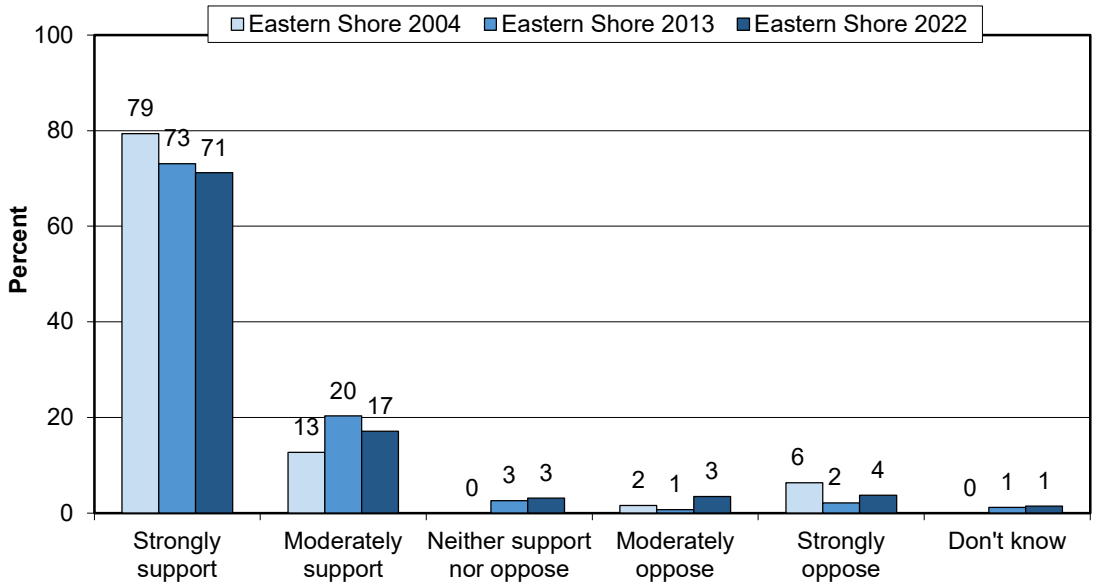
The DNR issuing depredation (kill) permits for black bears that cause damage to personal property or destruction of crops, resulting in a monetary loss for farmers in Maryland. (Do you support or oppose this to resolve situations with bears that cause damage?)



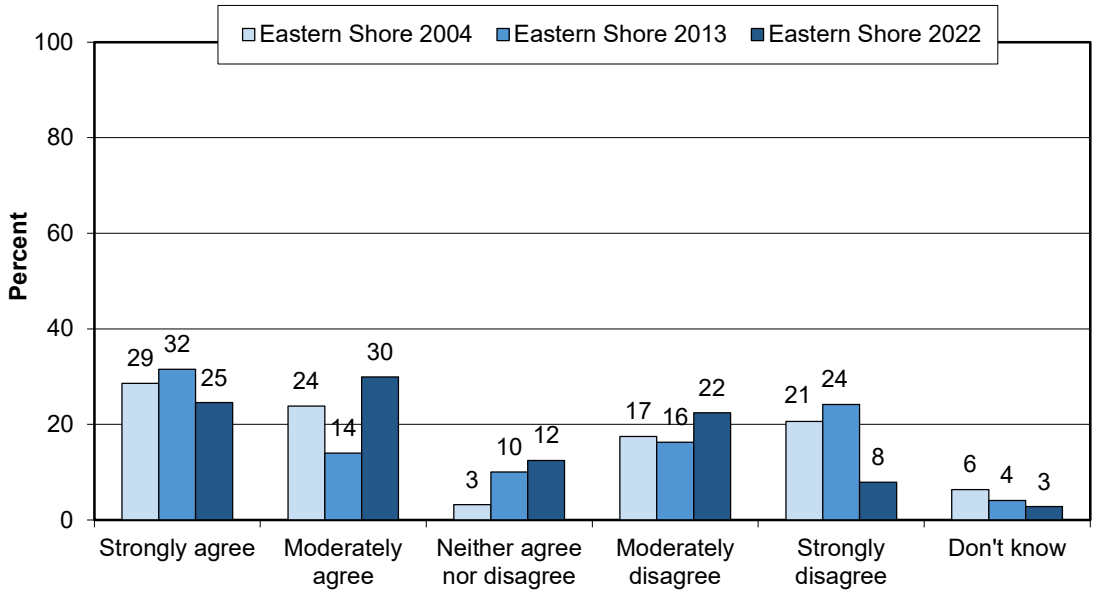
Allowing private citizens to kill bears that are causing damage to personal property or destruction of crops resulting in a monetary loss for farmers without first obtaining a depredation (kill) permit from the DNR. (Do you support or oppose this to resolve situations with bears that cause damage?)



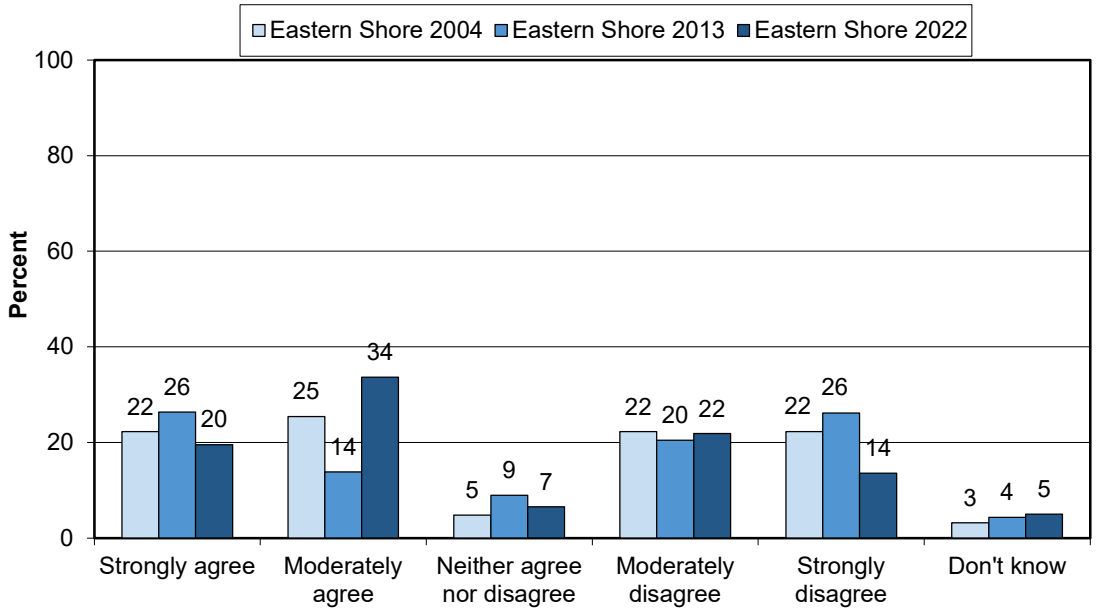
Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition for black bears that threaten human safety in Maryland?



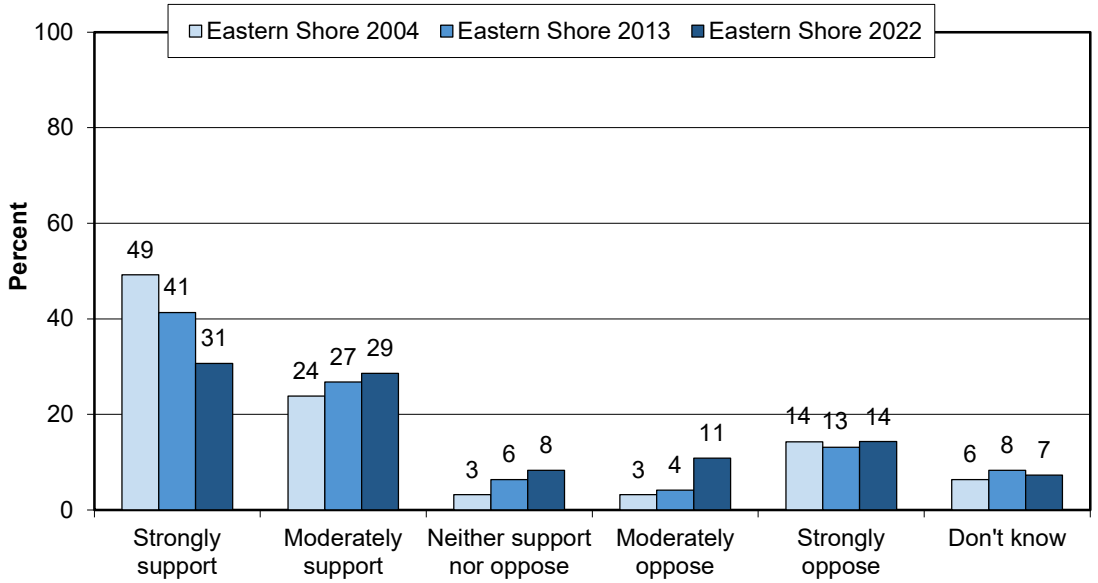
When black bear damage occurs to livestock in Maryland, do you agree or disagree that the property owner should be compensated for the damages?

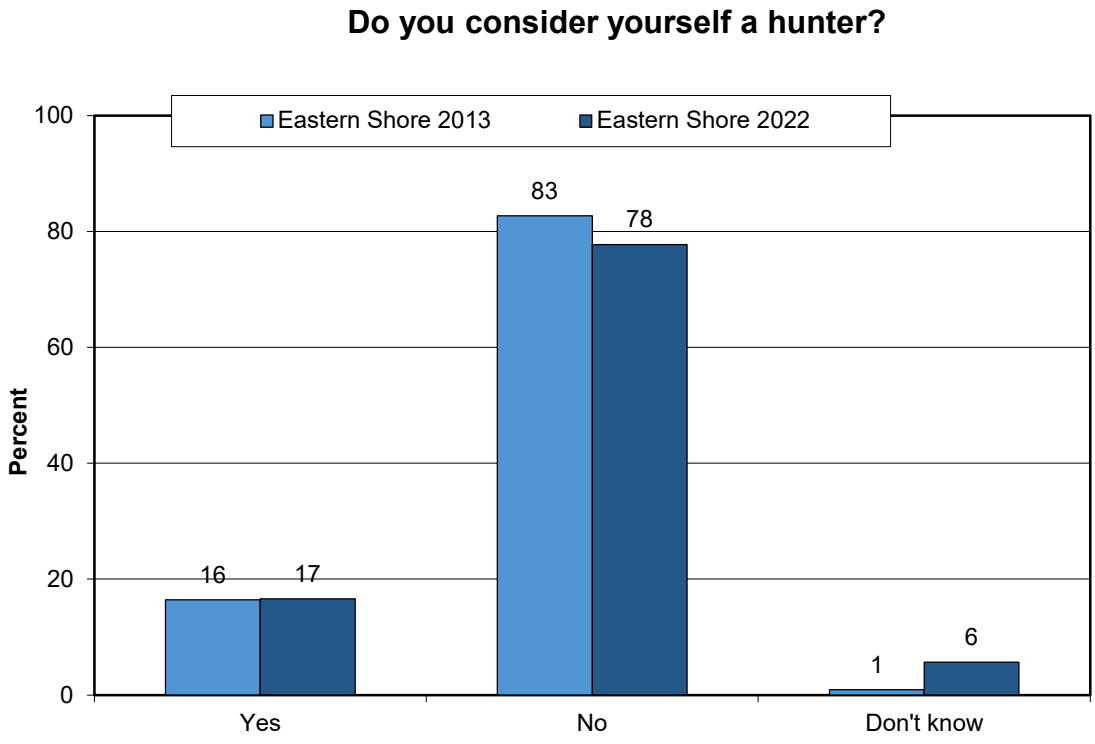


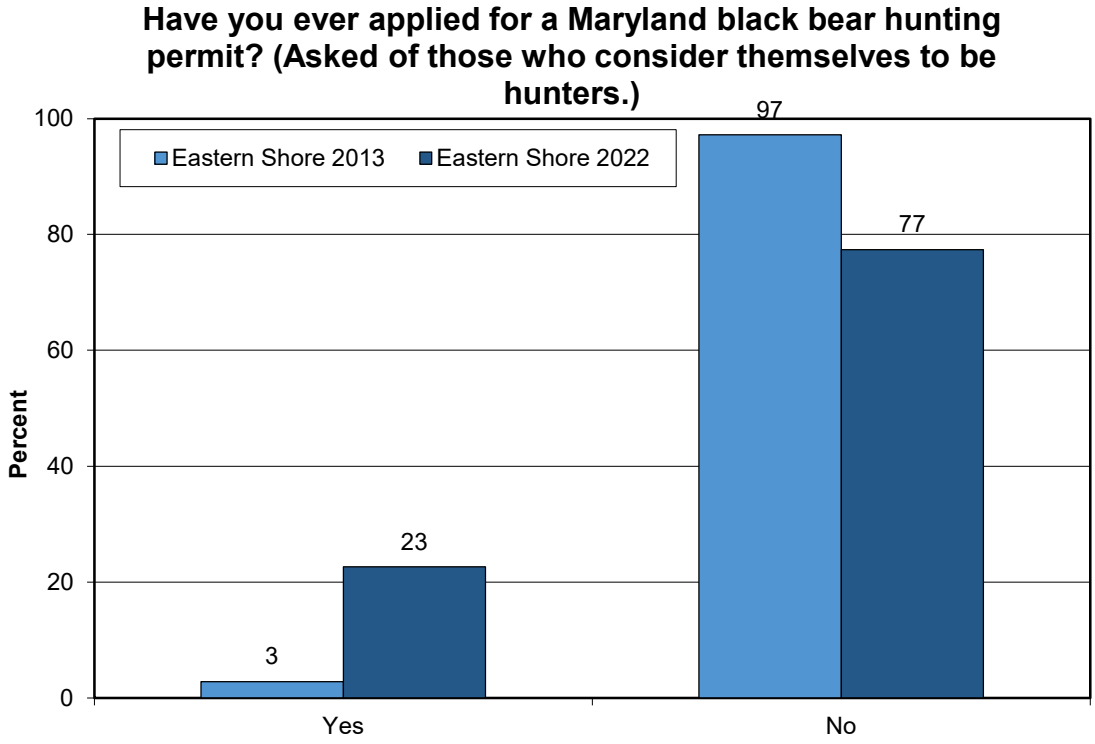
When black bear damage occurs to crops in Maryland, do you agree or disagree that the property owner should be compensated for the damages?



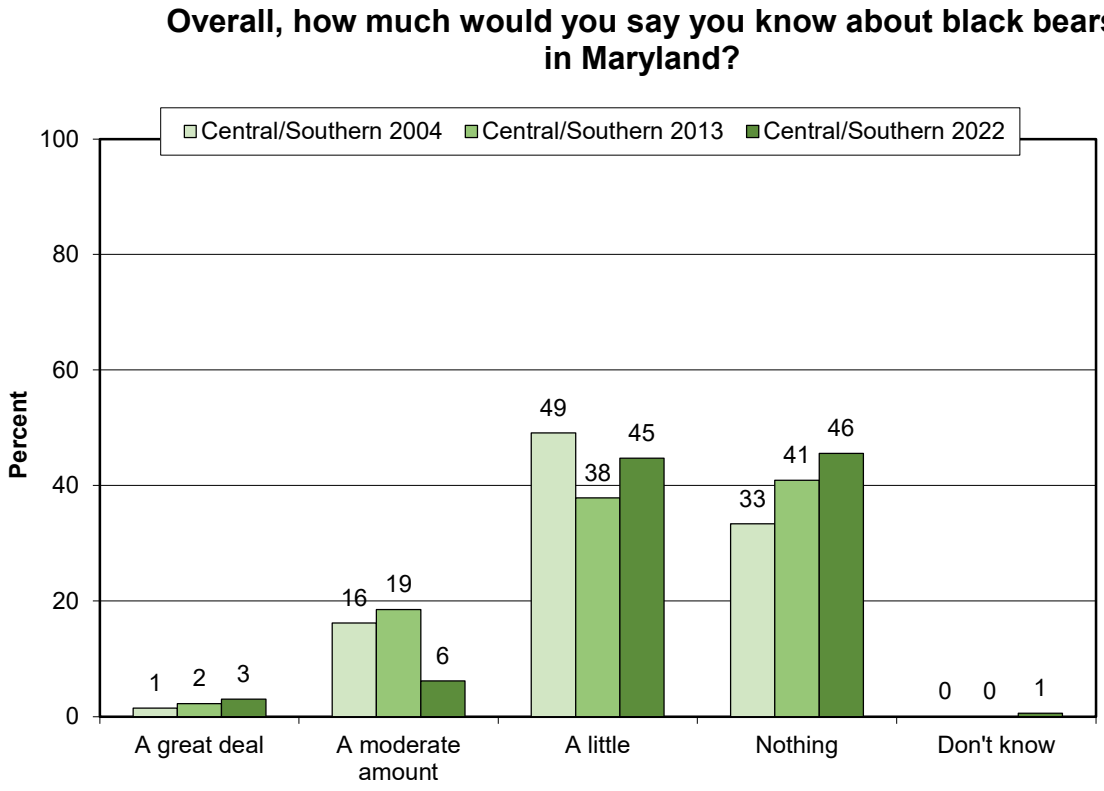
Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?

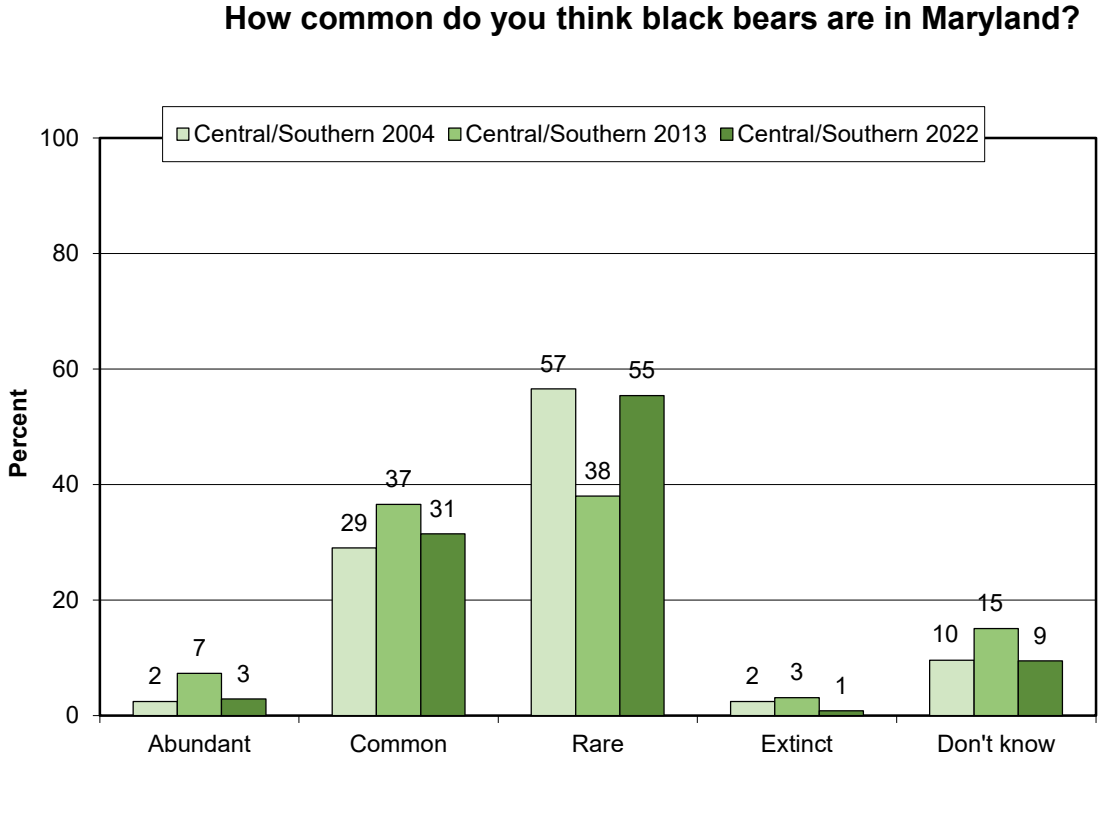



Do you consider yourself a hunter?
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
16
17
83
78
1
6
Yes
No
Don't know

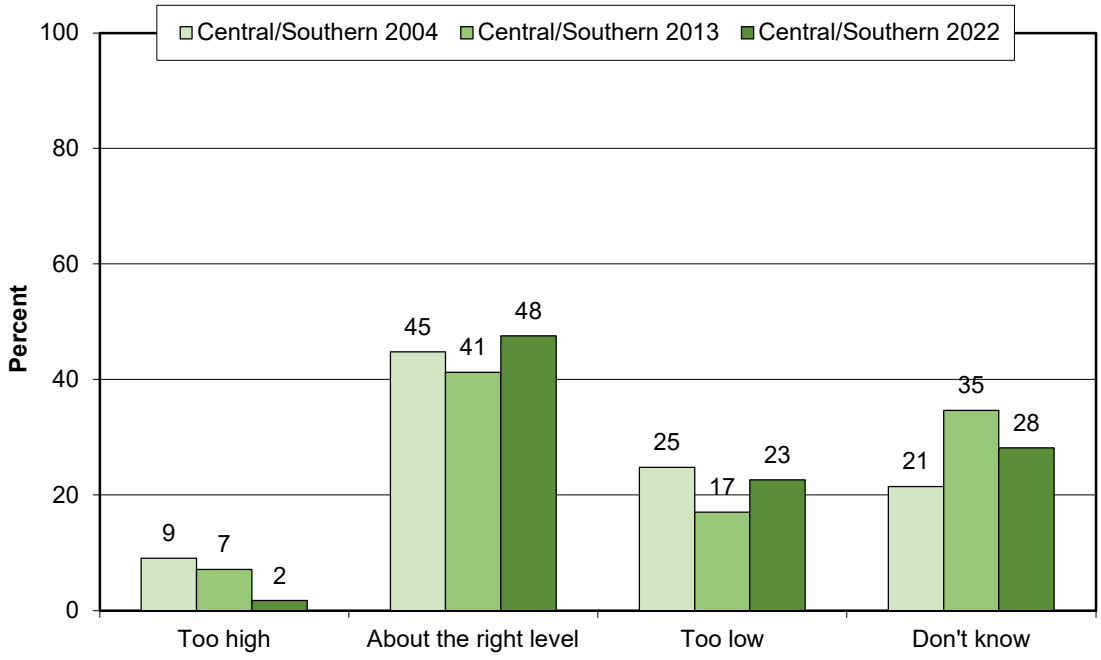

Have you ever applied for a Maryland black bear hunting permit? (Asked of those who consider themselves to be hunters.)
Eastern Shore 2013
Eastern Shore 2022
Percent
100
80
60
40
20
0
3
23
97
77
Yes
No

CENTRAL / SOUTHERN

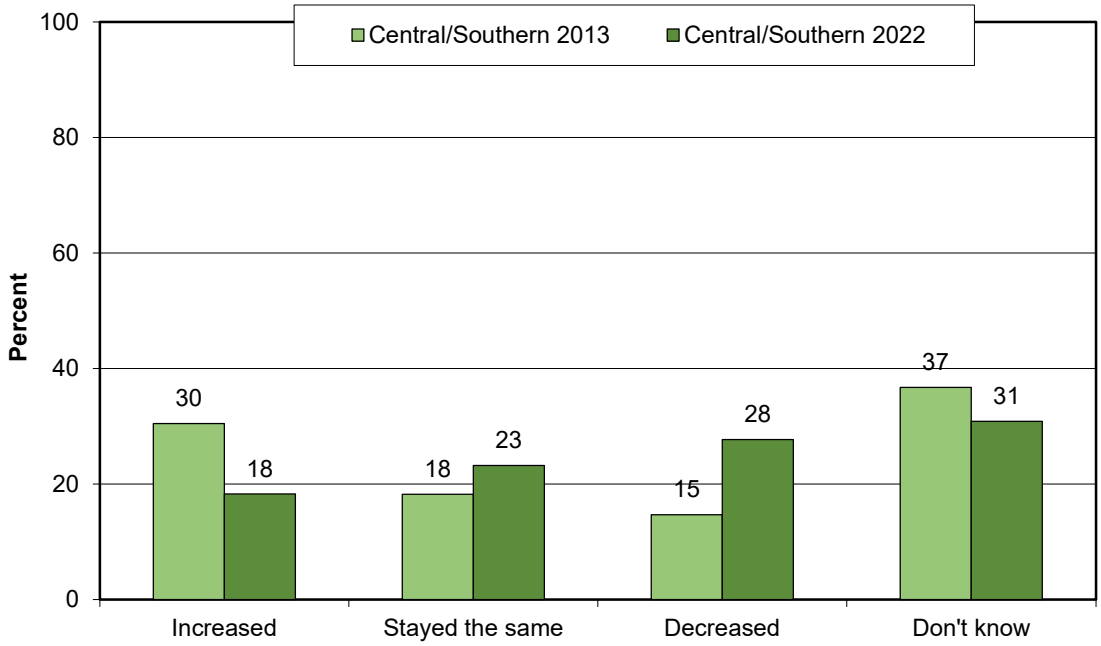


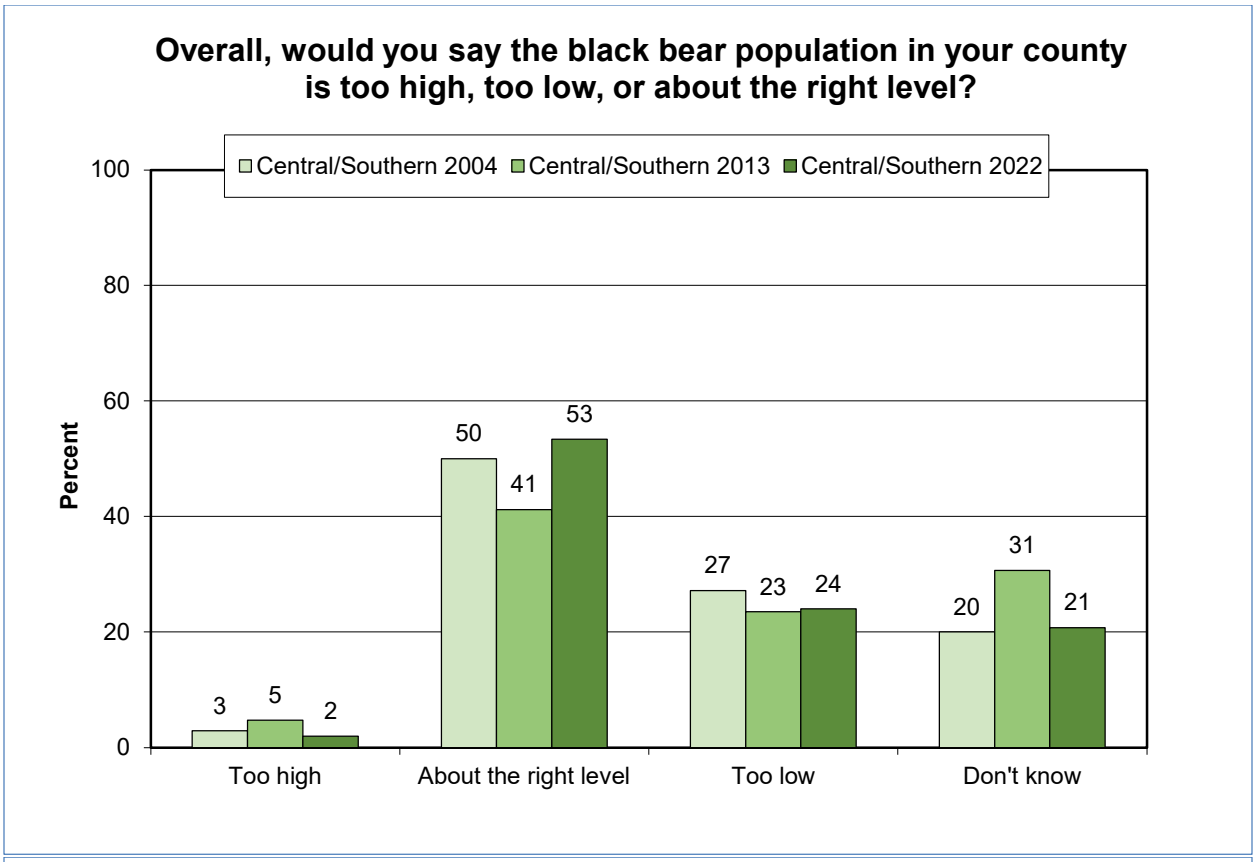


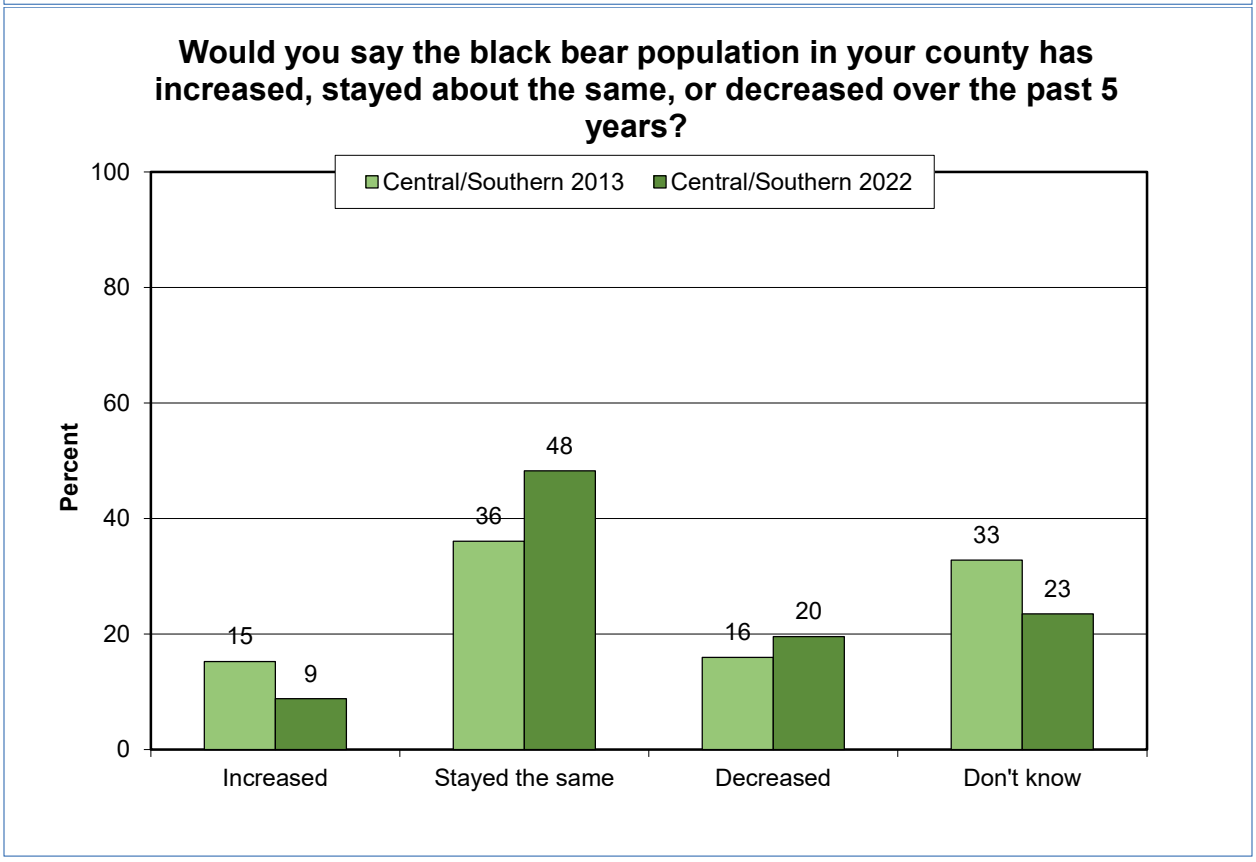
Overall, would you say the black bear population in Maryland is too high, too low, or about the right level?

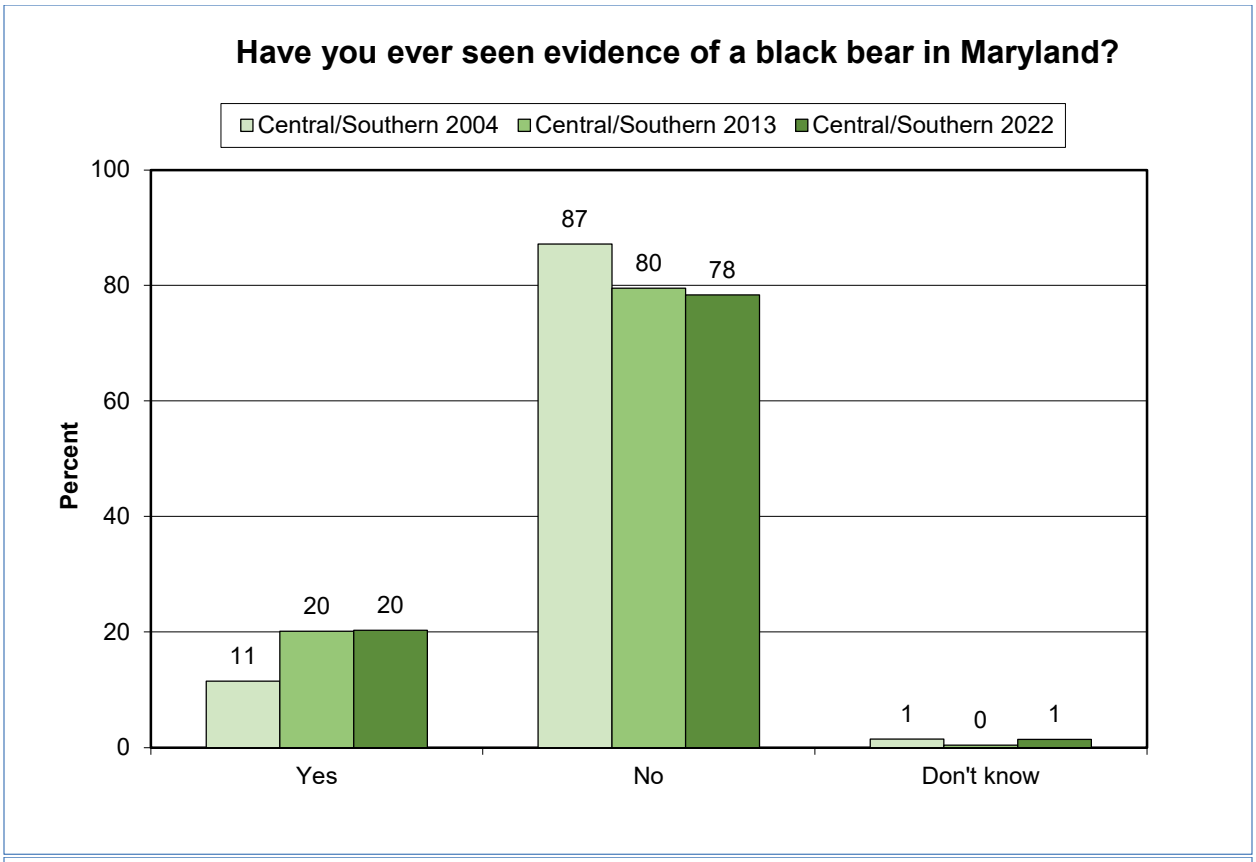


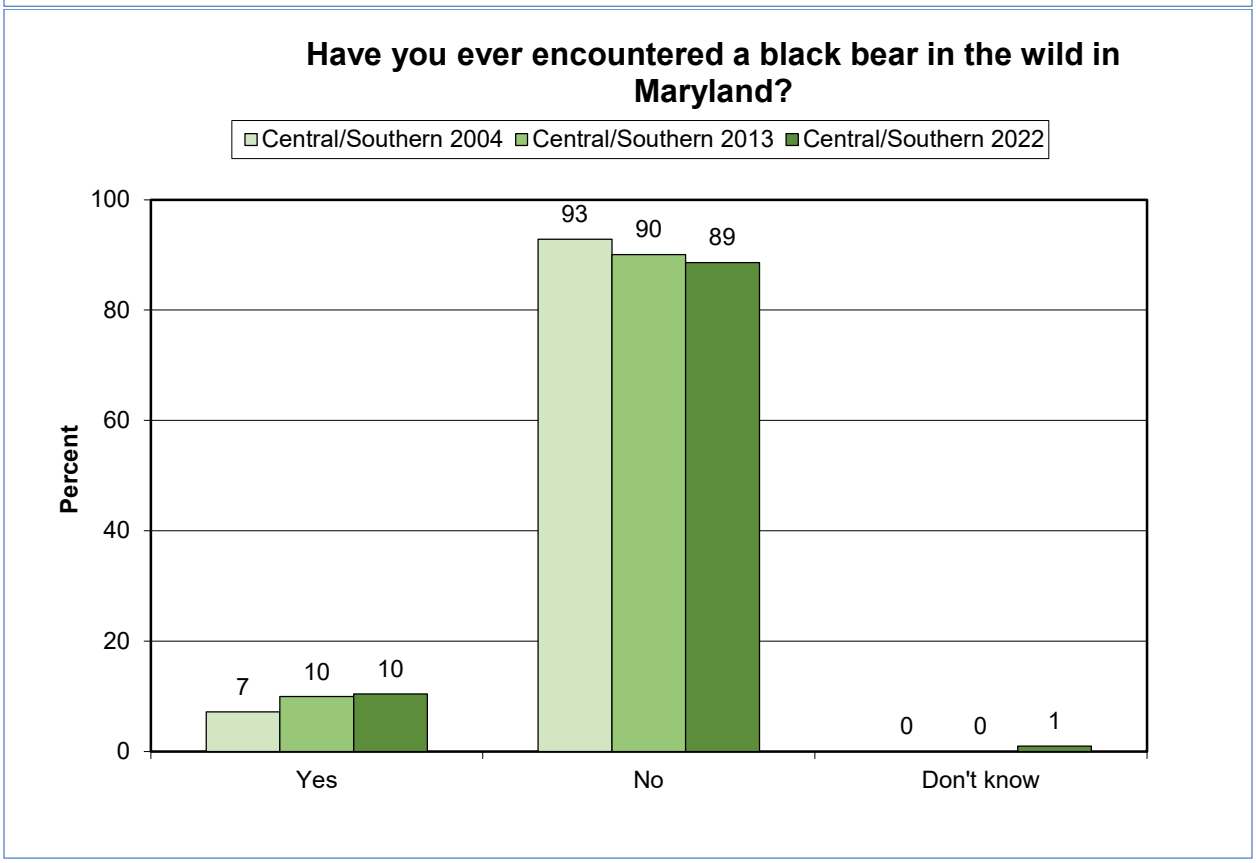
Would you say the black bear population in Maryland has increased, stayed about the same, or decreased over the past 5 years?



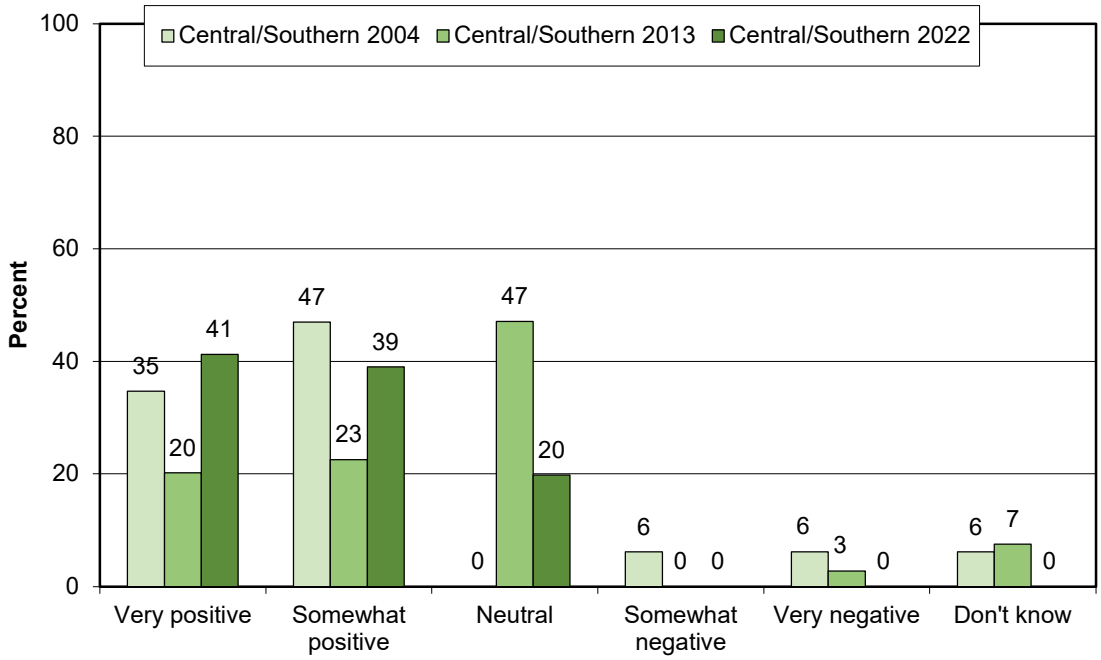

Overall, would you say the black bear population in your county is too high, too low, or about the right level?
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
3
5
2
50
41
53
27
23
24
20
31
21
Too high
About the right level
Too low
Don't know


Would you say the black bear population in your county has increased, stayed about the same, or decreased over the past 5 years?
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
15
9
36
48
16
20
33
23
Increased
Stayed the same
Decreased
Don't know

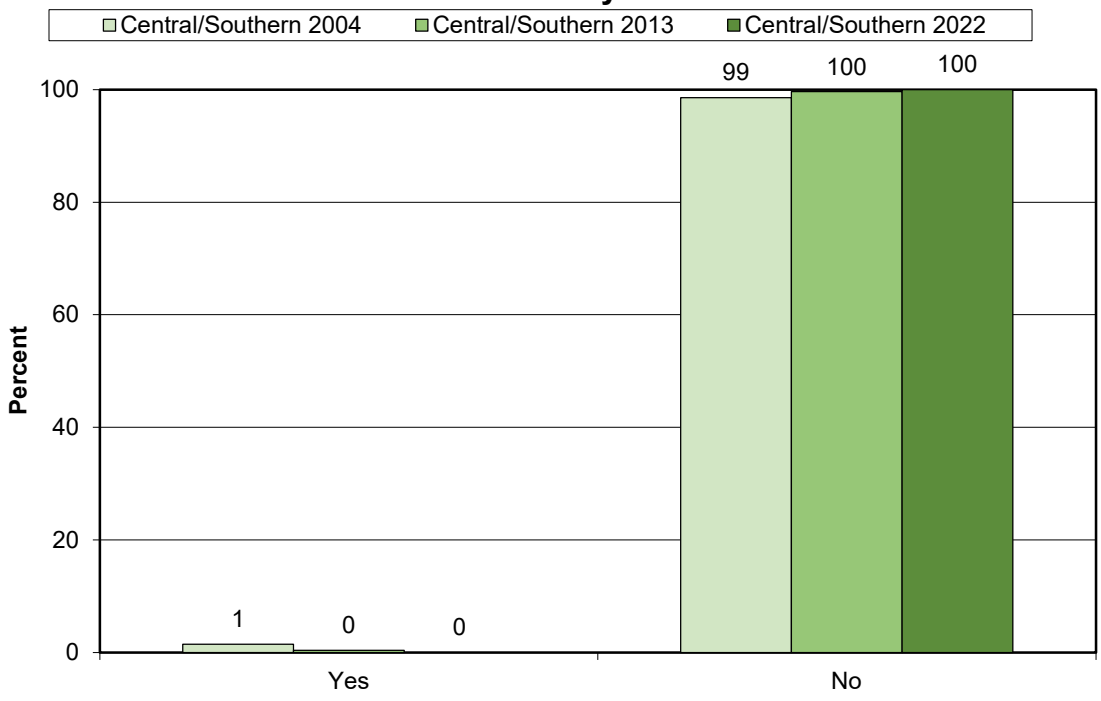

Have you ever seen evidence of a black bear in Maryland?
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
11
20
20
87
80
78
1
0
1
Yes
No
Don't know


Have you ever encountered a black bear in the wild in Maryland?
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
7
10
10
93
90
89
0
0
1
Yes
No
Don't know

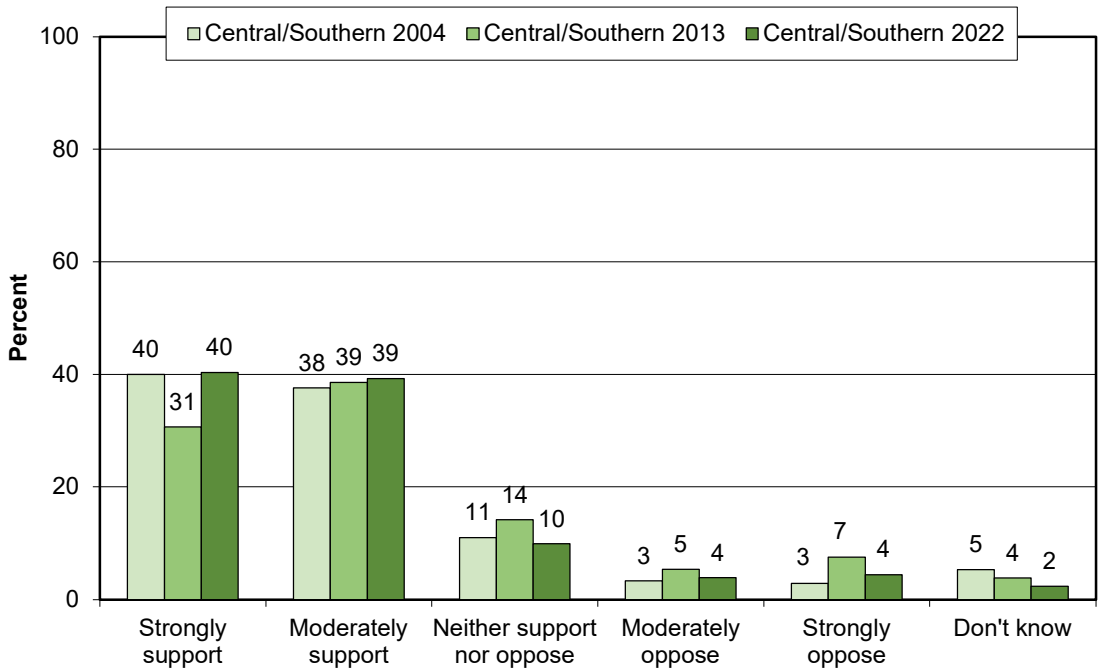
When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who encountered a black bear.)



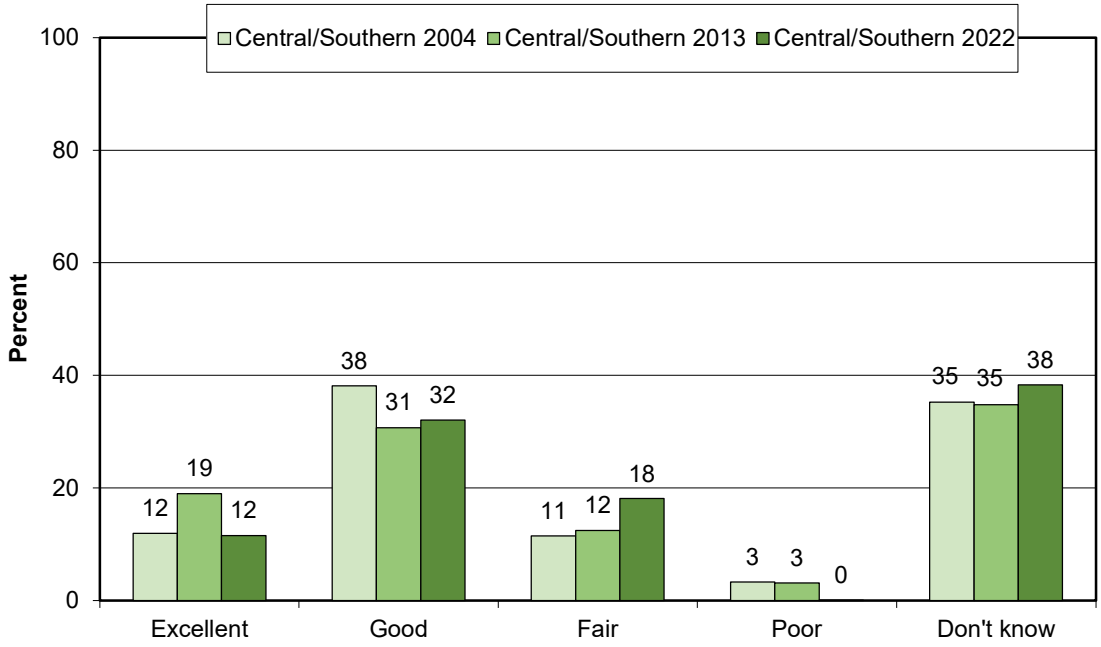
Have you had any problems with black bears within the past two years?



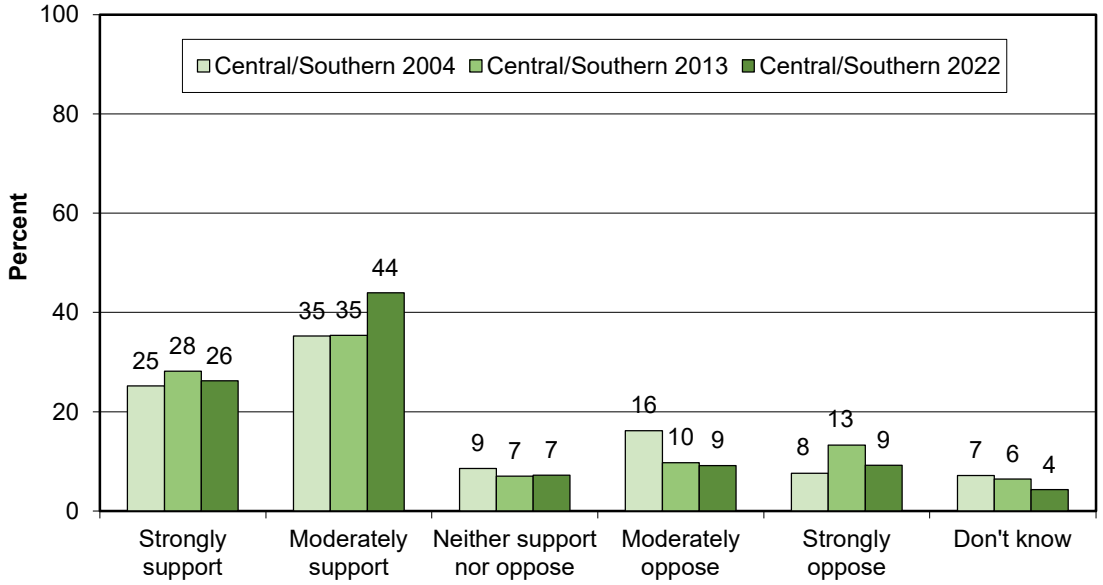
In general, do you support or oppose having black bears in Maryland?



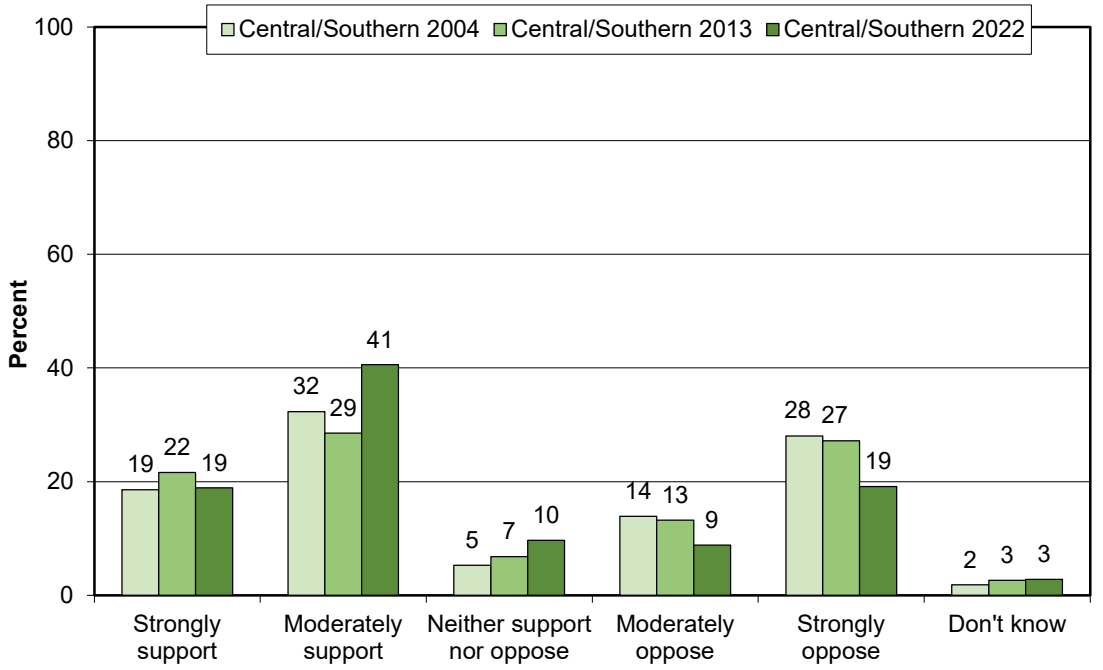
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?



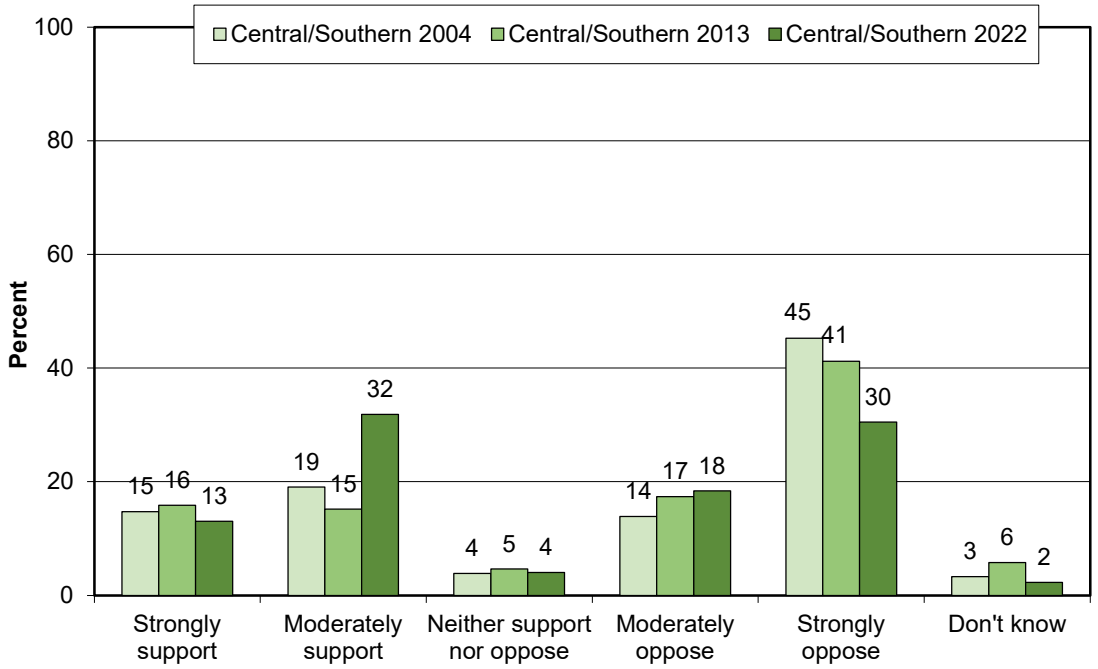
For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?



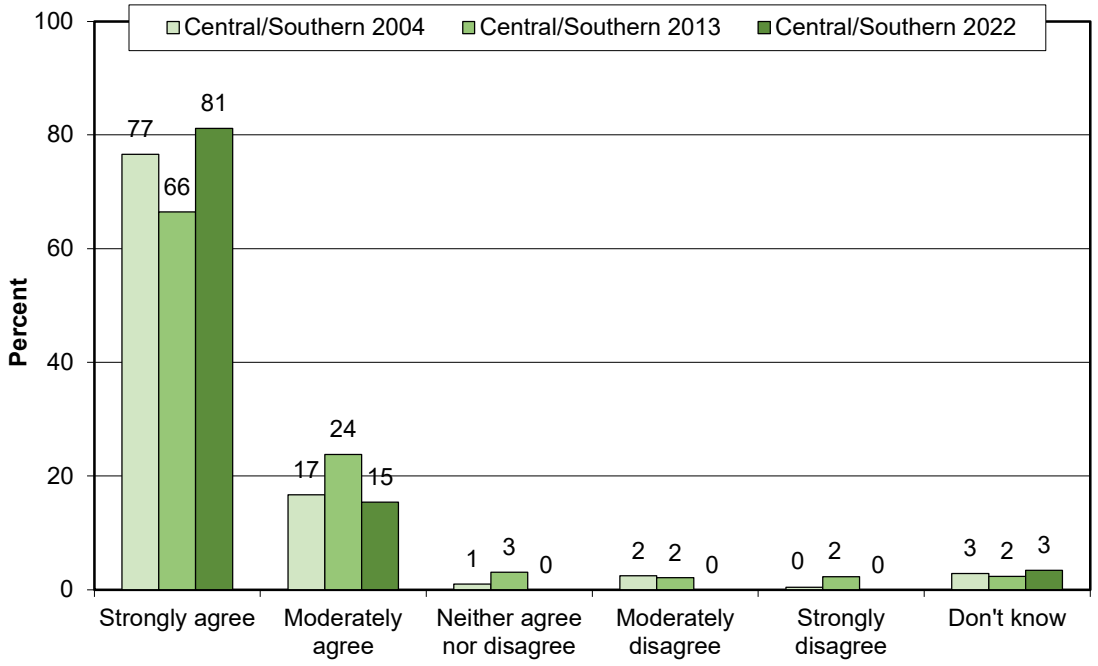
Would you support or oppose having black bears in your county?

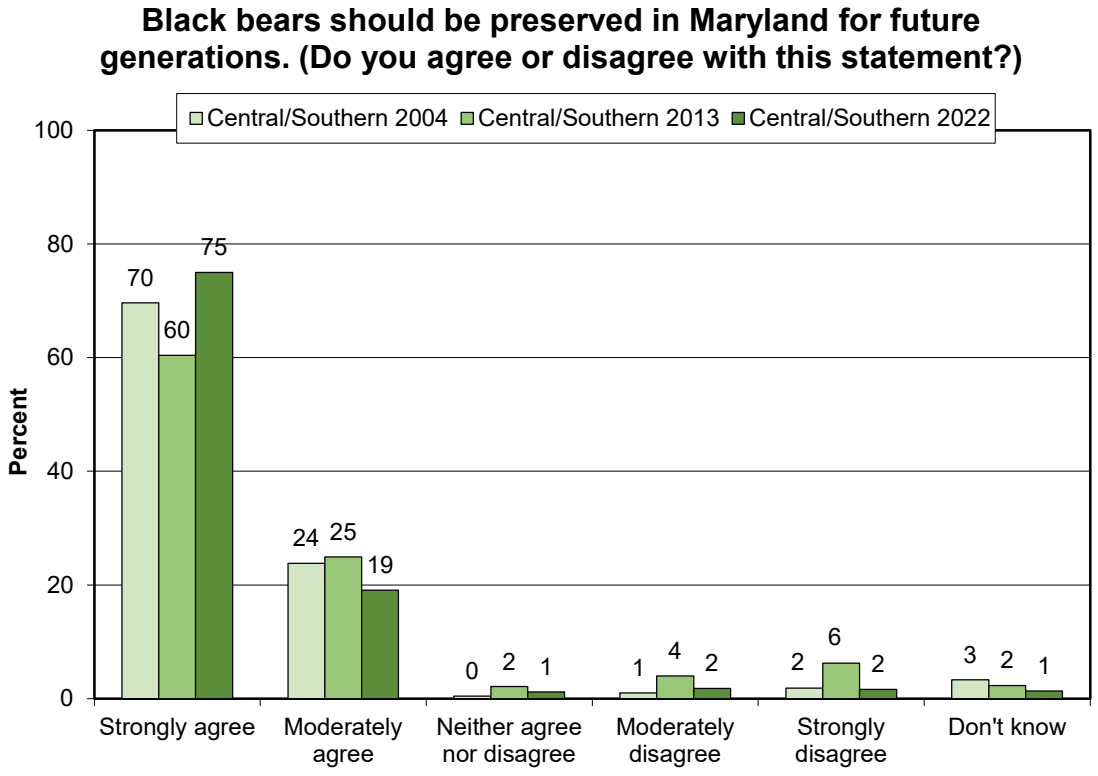


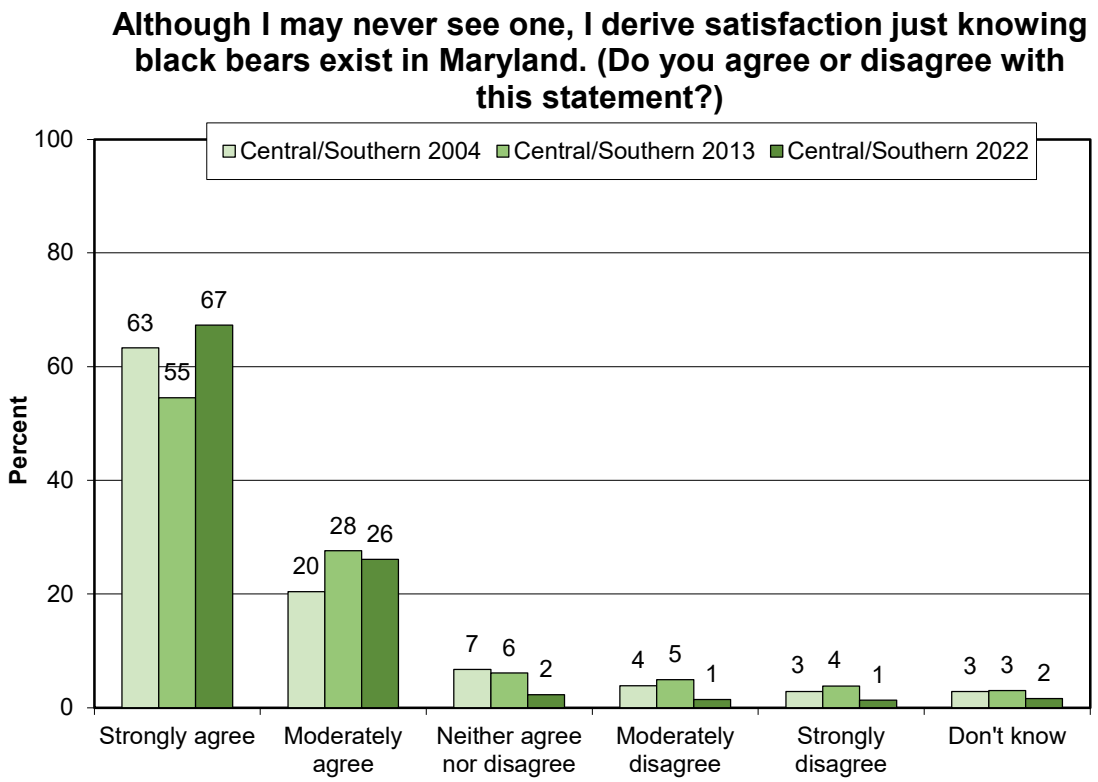
Would you support or oppose having black bears within 1/2 mile of your home?



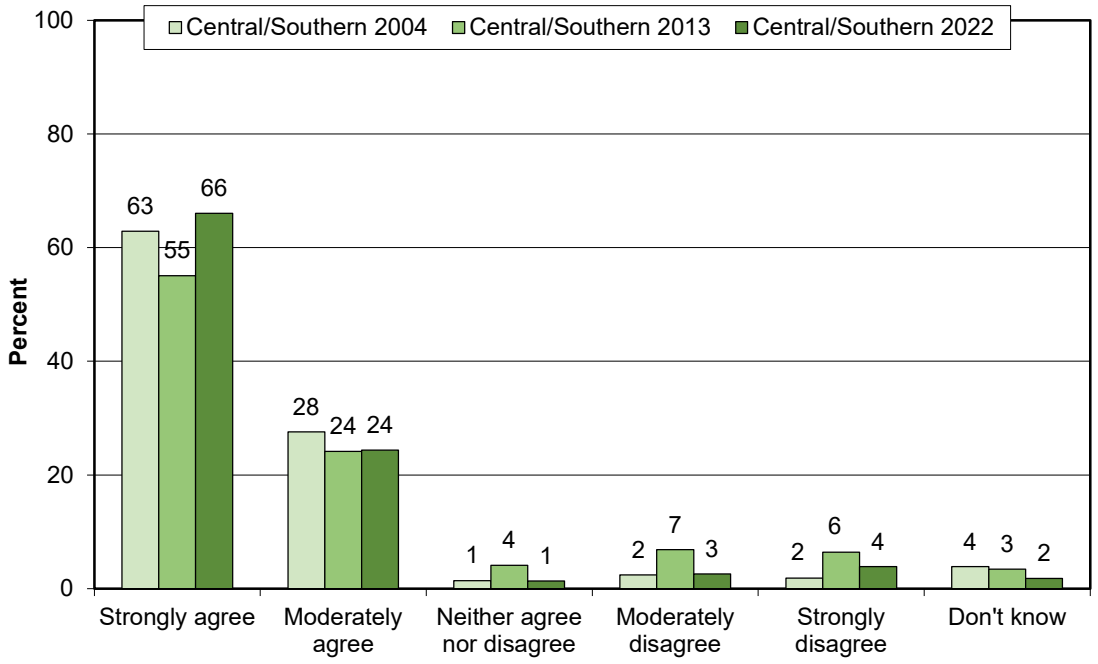
Preserving habitat on which black bears depend is important. (Do you agree or disagree with this statement?)



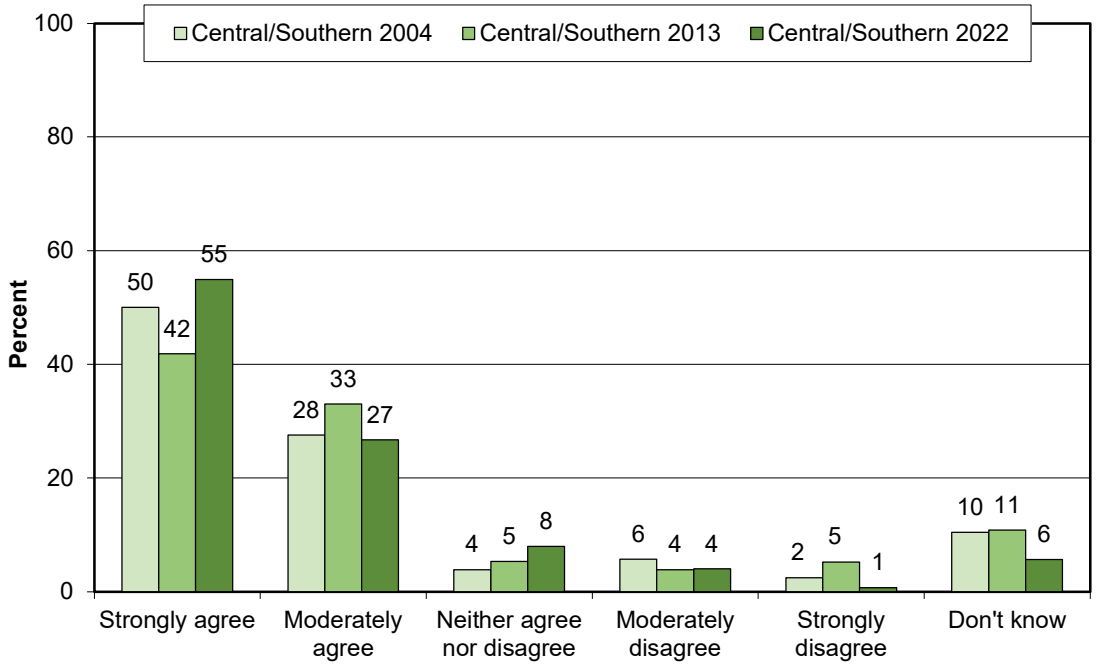

Black bears should be preserved in Maryland for future generations. (Do you agree or disagree with this statement?)
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
70
60
75
24
25
19
0
2
1
1
4
2
2
6
2
3
2
1
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

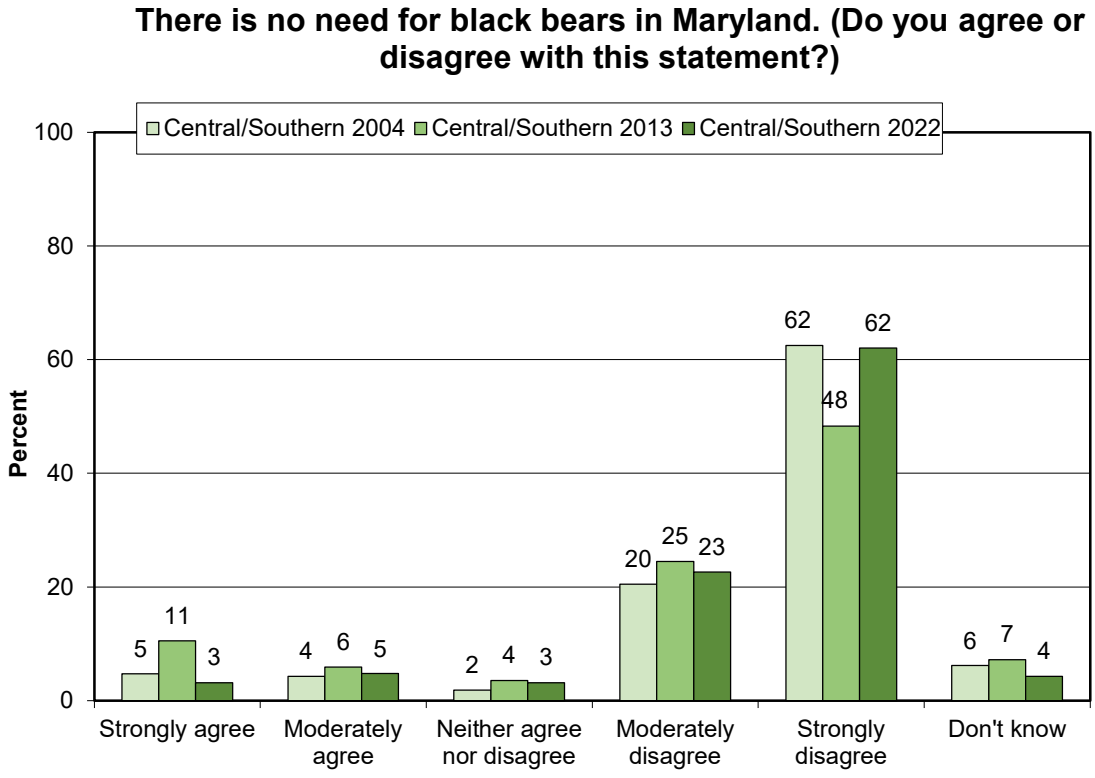

Although I may never see one, I derive satisfaction just knowing black bears exist in Maryland. (Do you agree or disagree with this statement?)
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
63
55
67
20
28
26
7
6
2
4
5
1
3
4
1
3
3
2
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

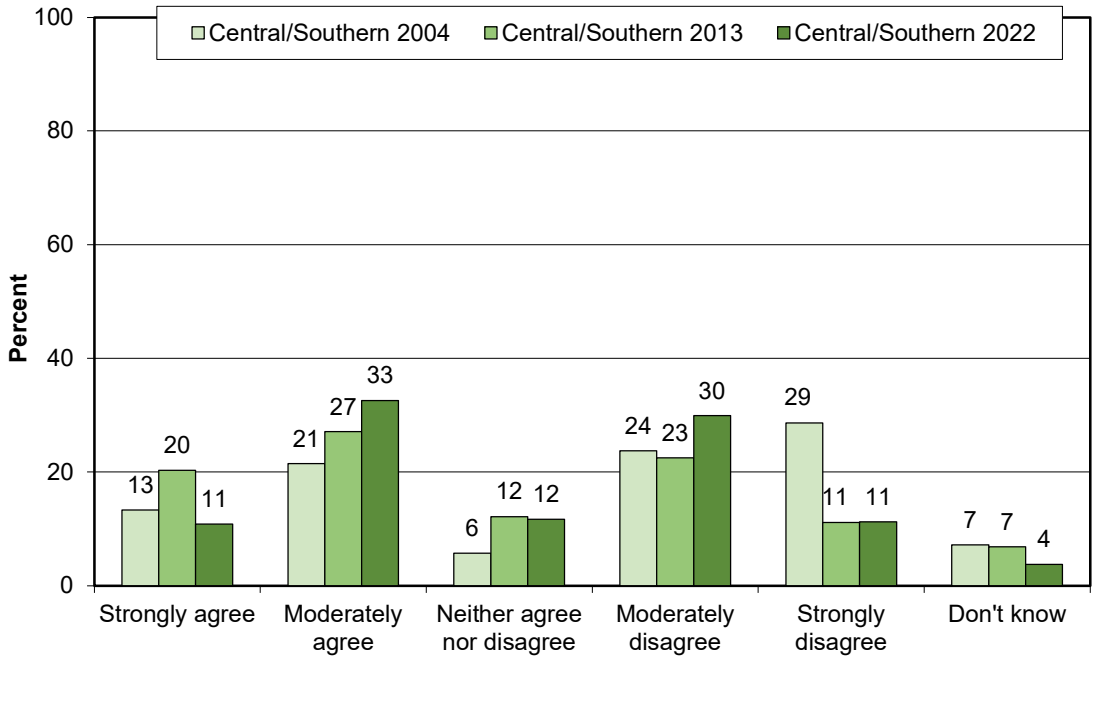
Black bears have an inherent right to live in Maryland. (Do you agree or disagree with this statement?)



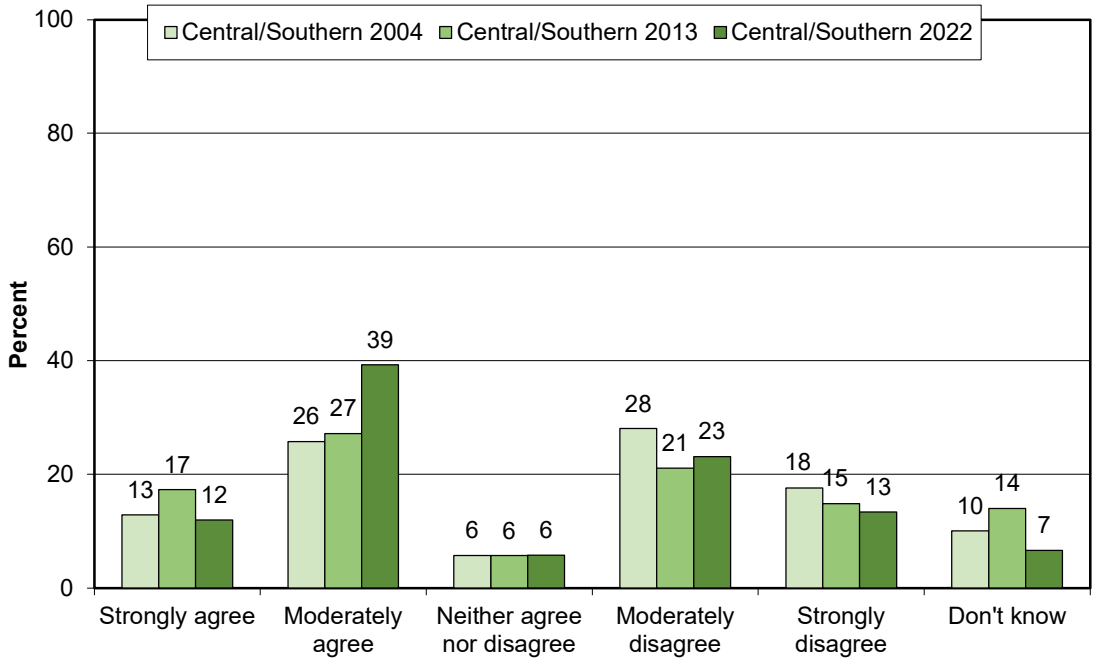
Black bears are an important and essential part of Maryland's ecosystem. (Do you agree or disagree with this statement?)



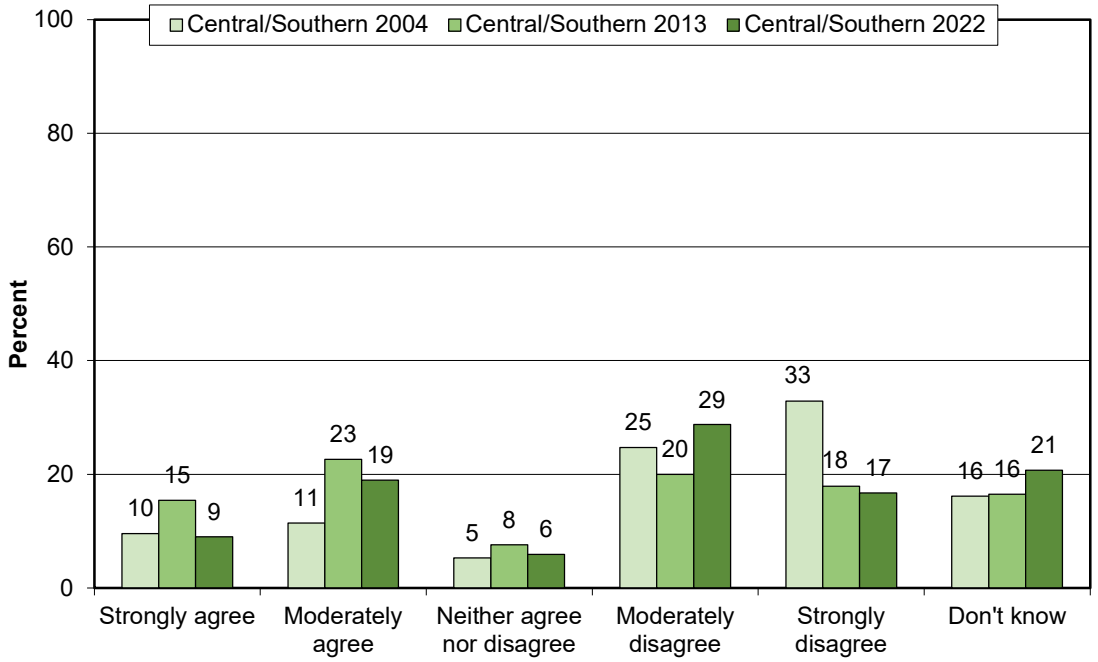

There is no need for black bears in Maryland. (Do you agree or disagree with this statement?)
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
5
11
3
4
6
5
2
4
3
20
25
23
62
48
62
6
7
4
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know


Black bears in Maryland are dangerous to humans. (Do you agree or disagree with this statement?)
Central/Southern 2004
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
13
20
11
21
27
33
6
12
12
24
23
30
29
11
11
7
7
4
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

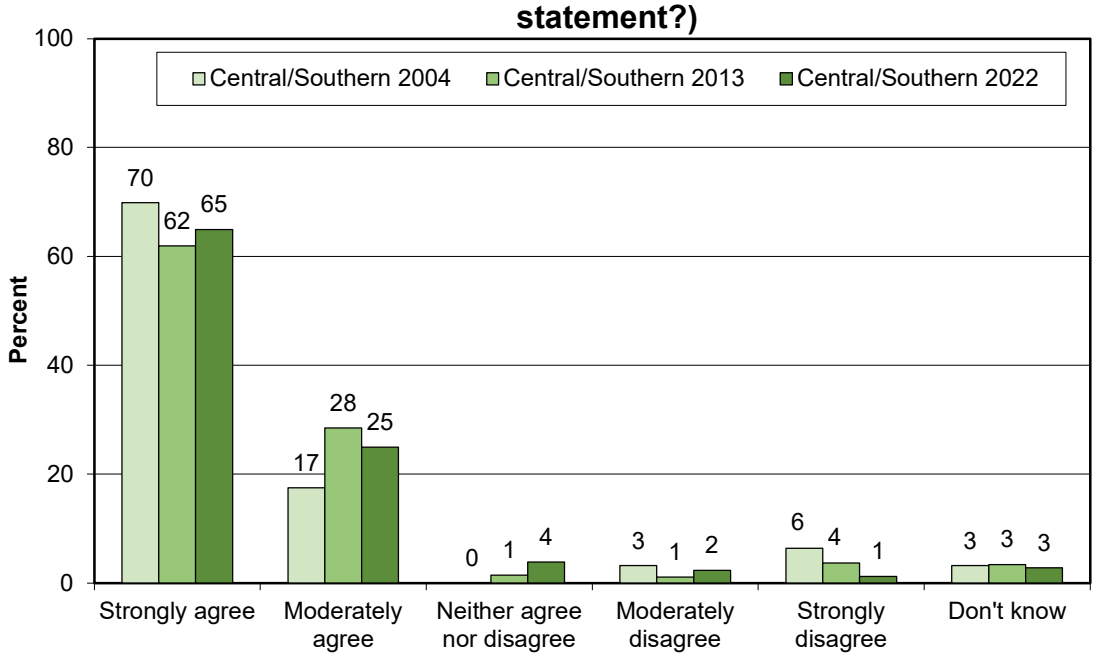
Black bears will frequently enter into populated areas in Maryland. (Do you agree or disagree with this statement?)



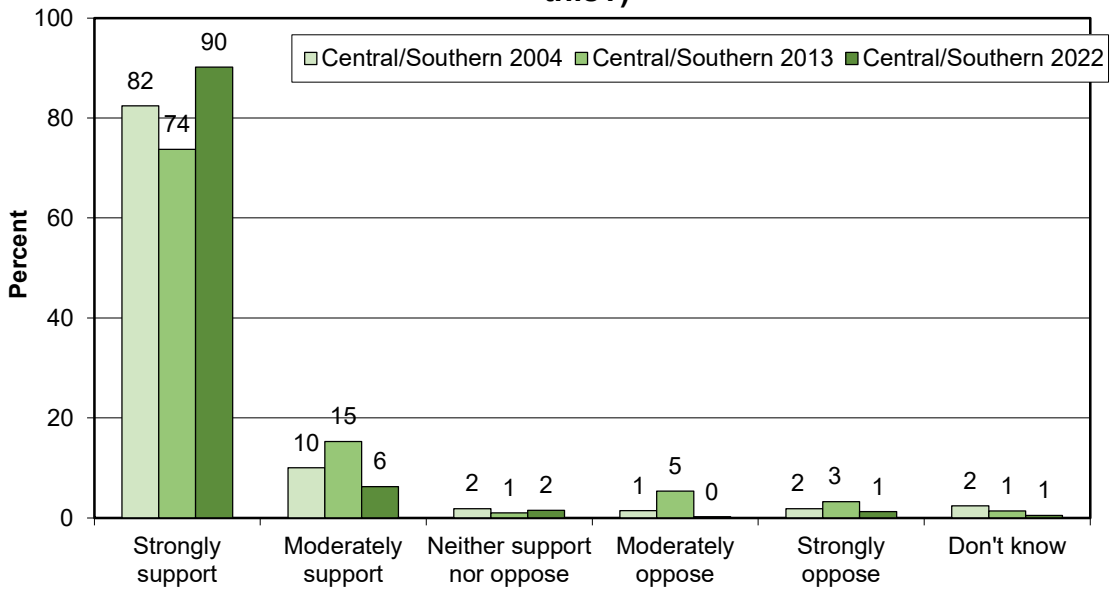
Black bears will kill many livestock and pets in Maryland. (Do you agree or disagree with this statement?)



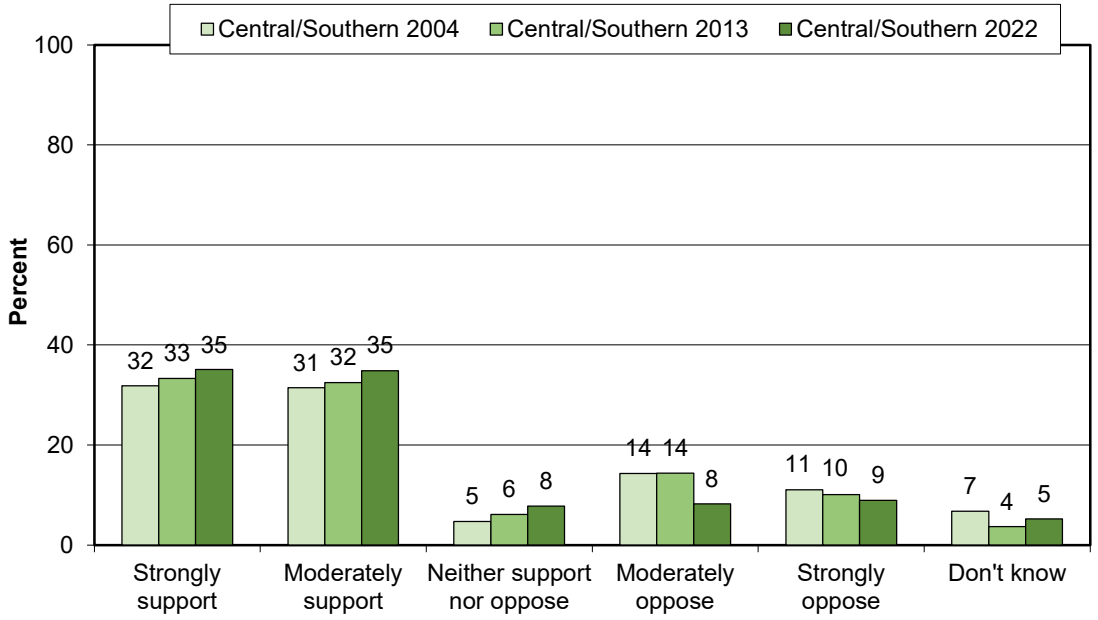
Most problems with black bears in Maryland can be prevented by taking a few simple precautions, such as using bear proof trash containers. (Do you agree or disagree with this statement?)



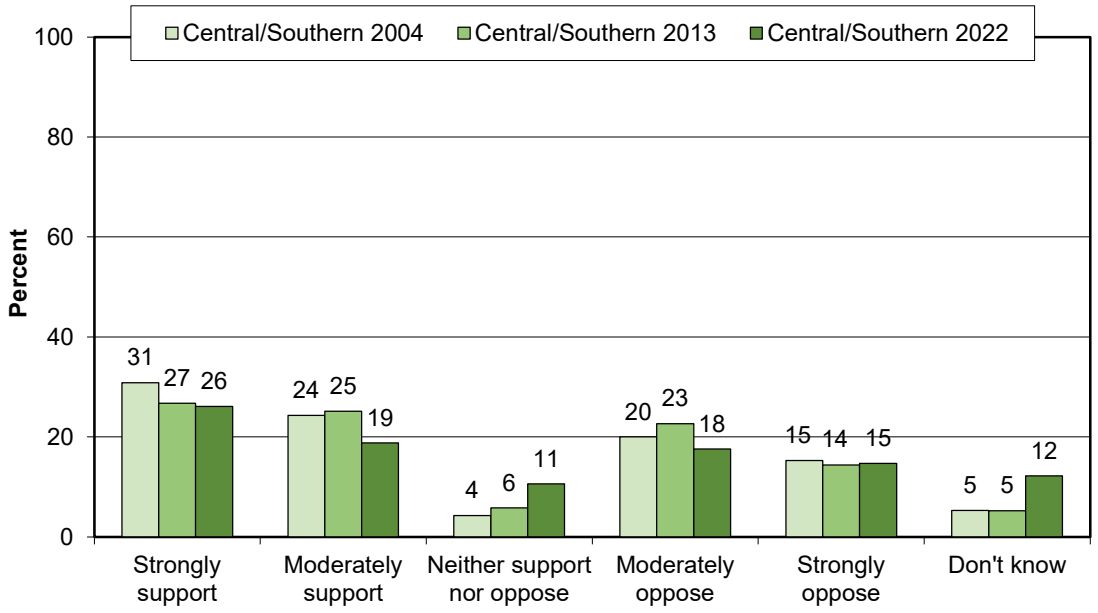
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas. (Would you support or oppose this?)



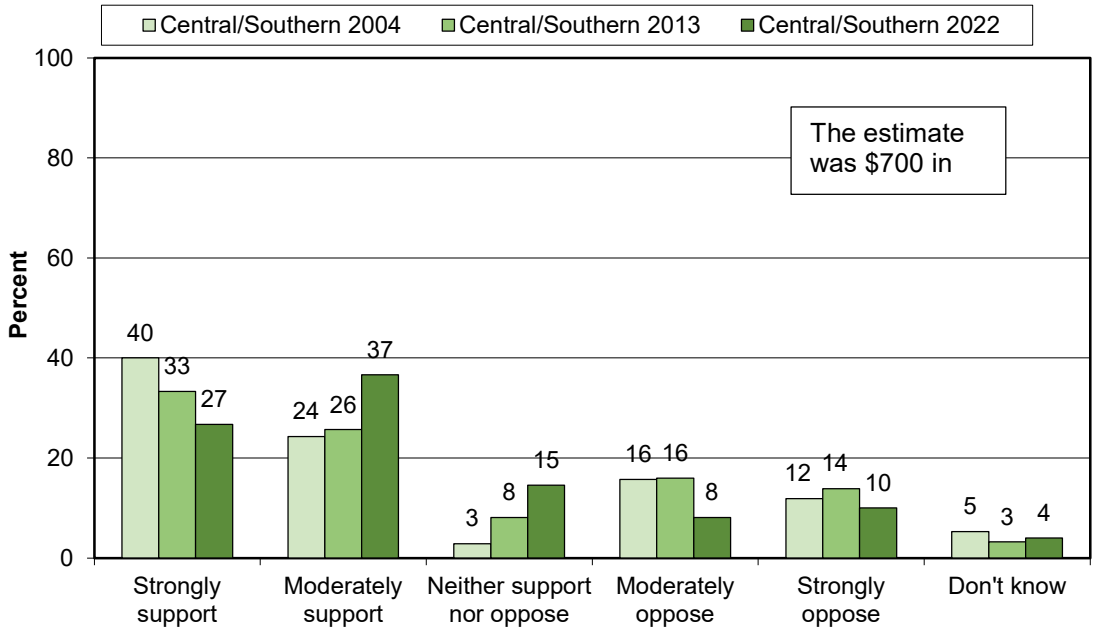
The use of electric fencing around small area bear attractants, such as beehives and aviaries. (Would you support or oppose this?)



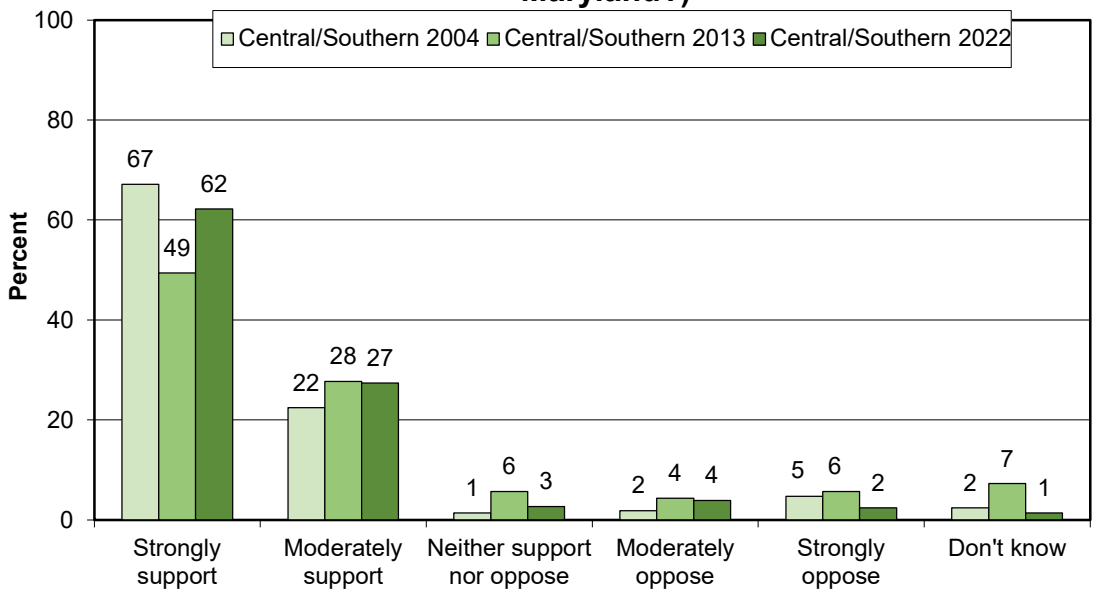
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities. (Would you support or oppose this?)



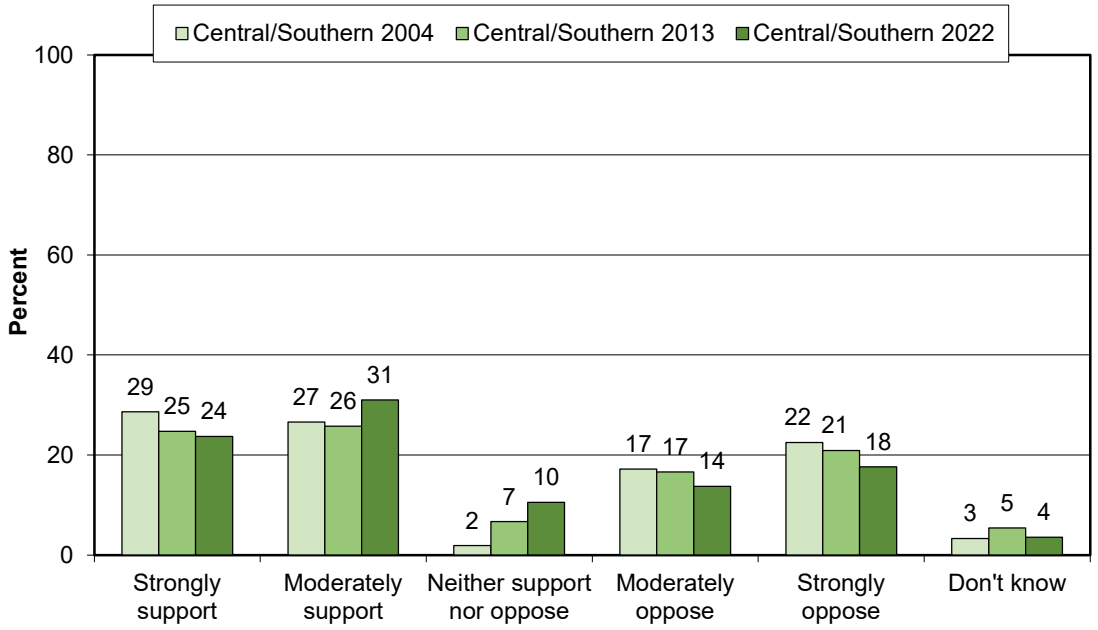
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more. (Would you support or oppose this?)



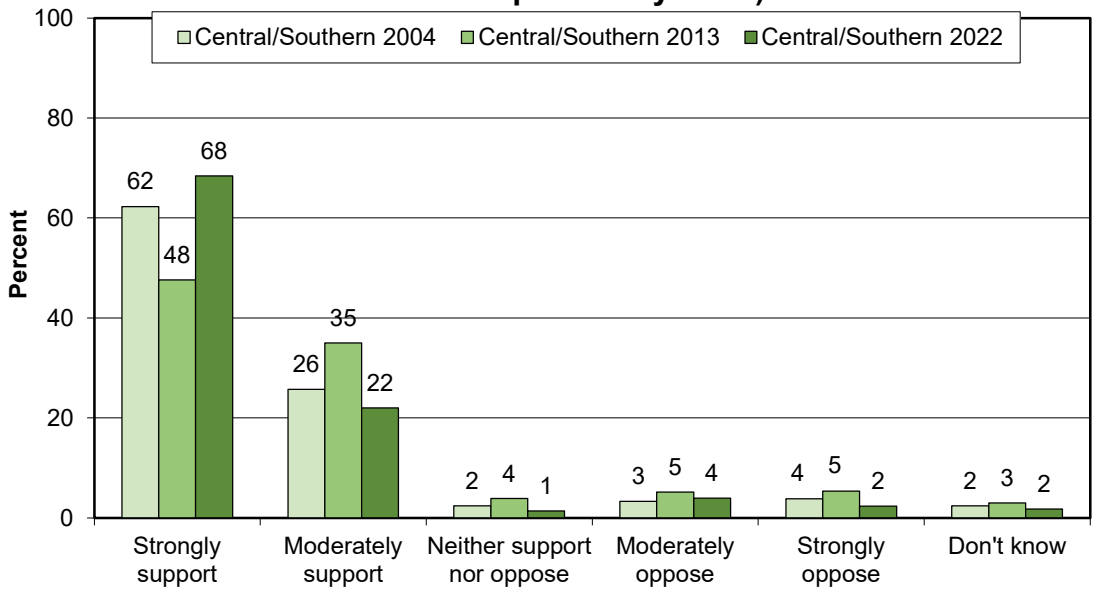
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



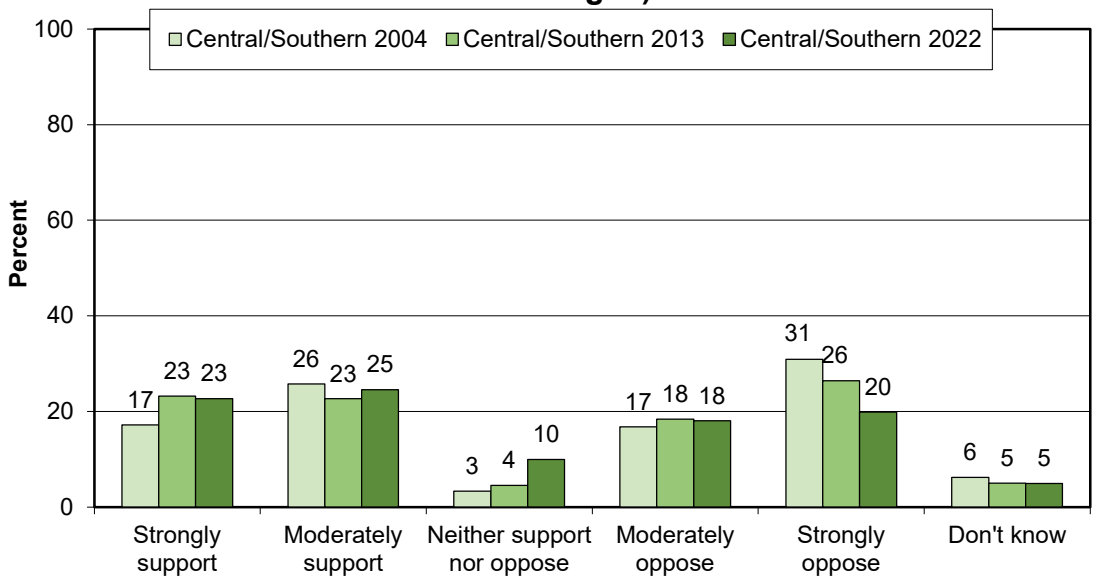
The DNR issuing depredation (kill) permits for black bears. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



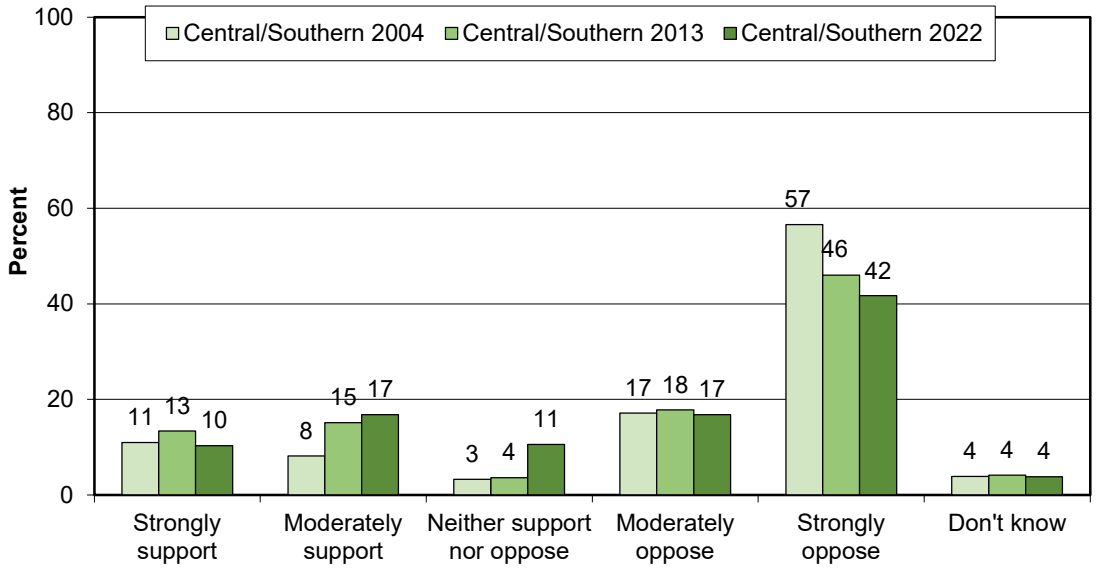
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)



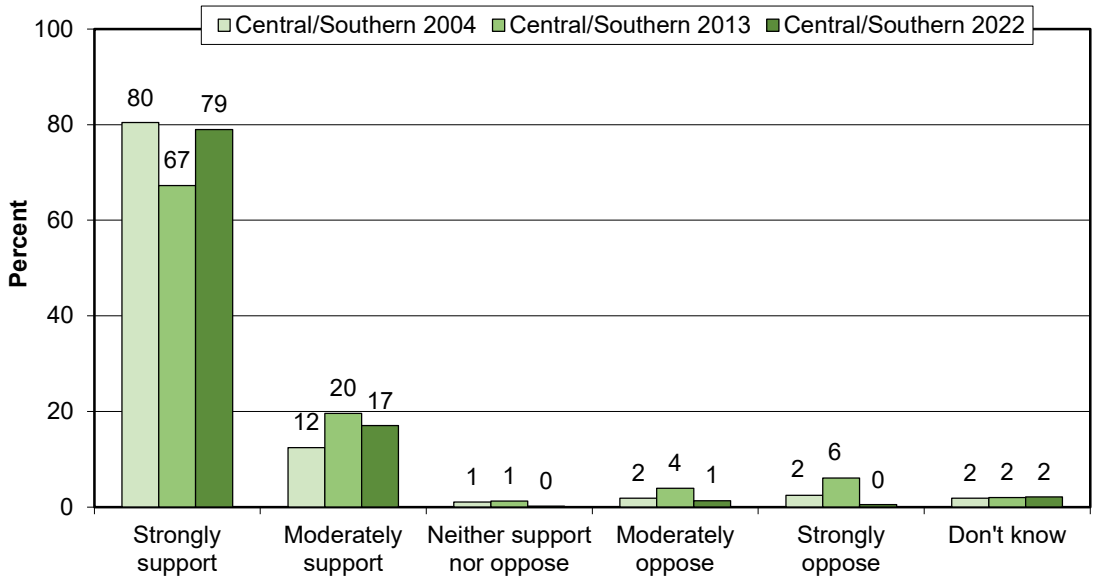
The DNR issuing depredation (kill) permits for black bears that cause damage to personal property or destruction of crops, resulting in a monetary loss for farmers in Maryland. (Do you support or oppose this to resolve situations with bears that cause damage?)



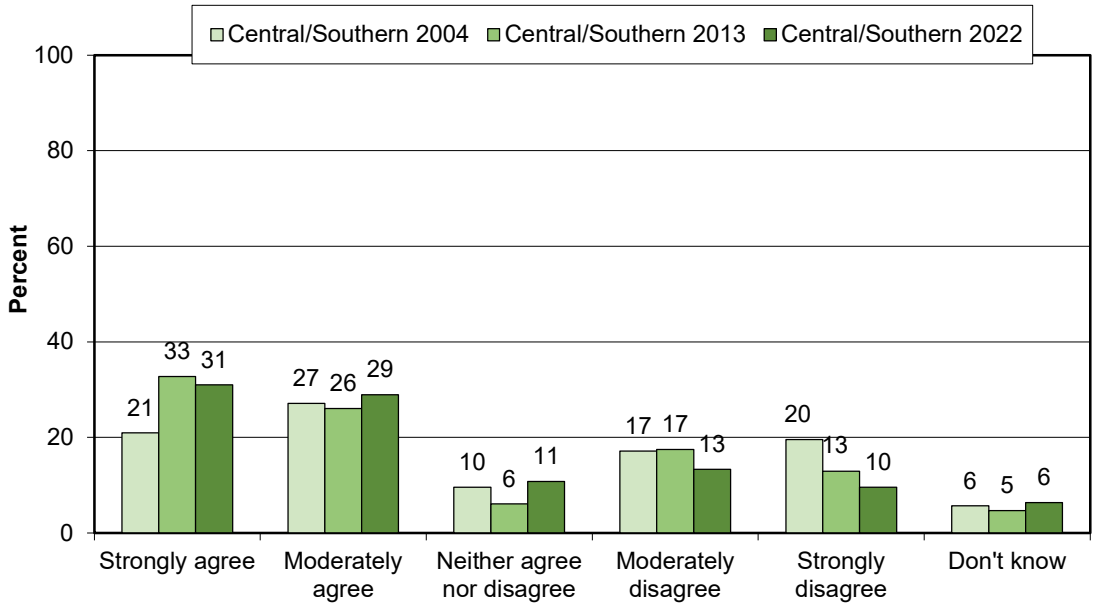
Allowing private citizens to kill bears that are causing damage to personal property or destruction of crops resulting in a monetary loss for farmers without first obtaining a depredation (kill) permit from the DNR. (Do you support or oppose this to resolve situations with bears that cause damage?)



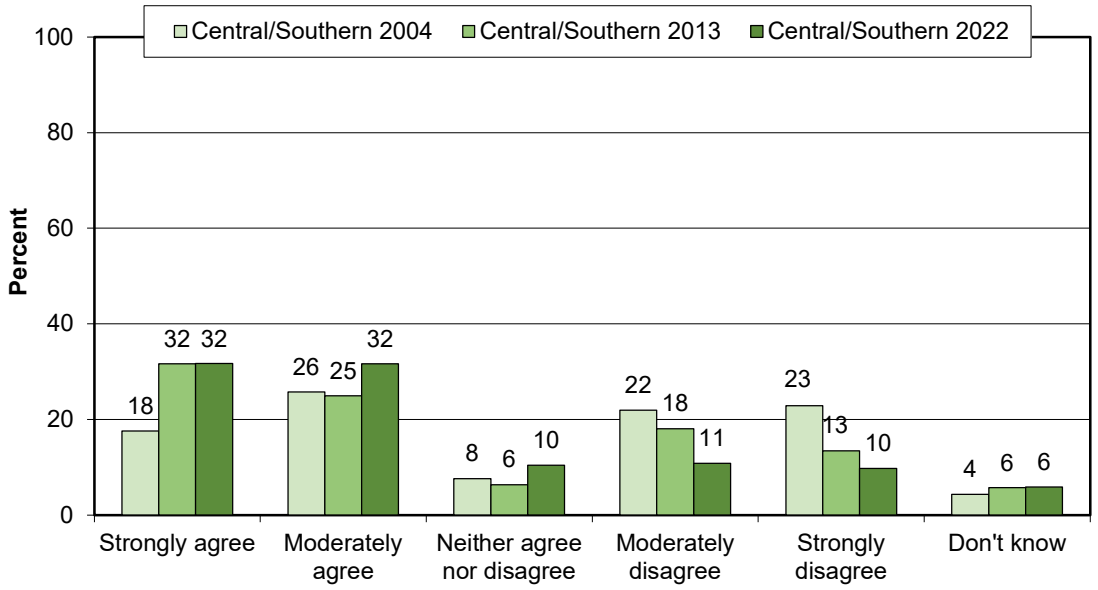
Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition for black bears that threaten human safety in Maryland?



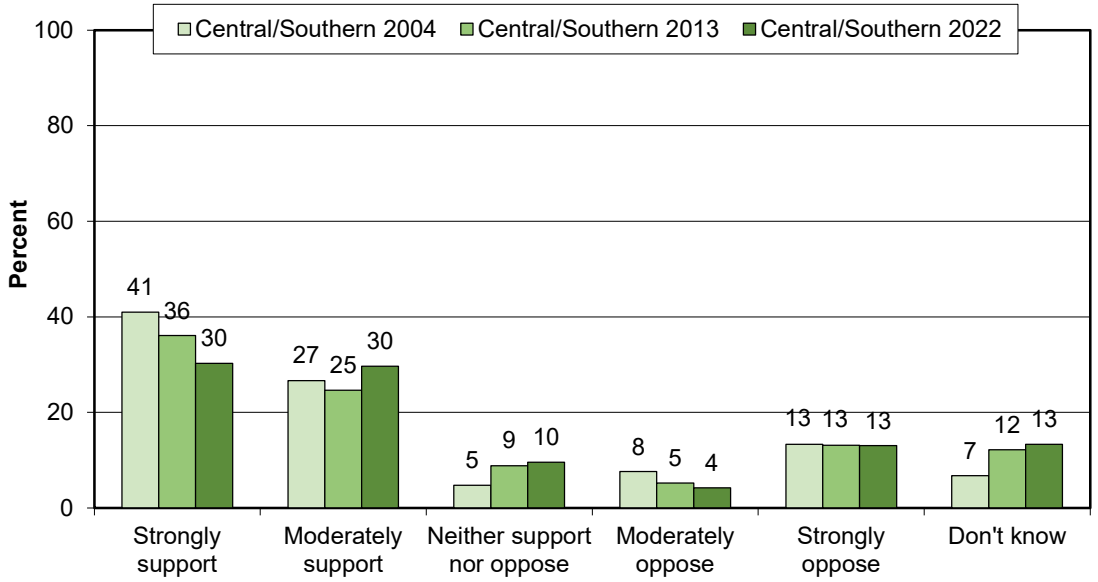
When black bear damage occurs to livestock in Maryland, do you agree or disagree that the property owner should be compensated for the damages?

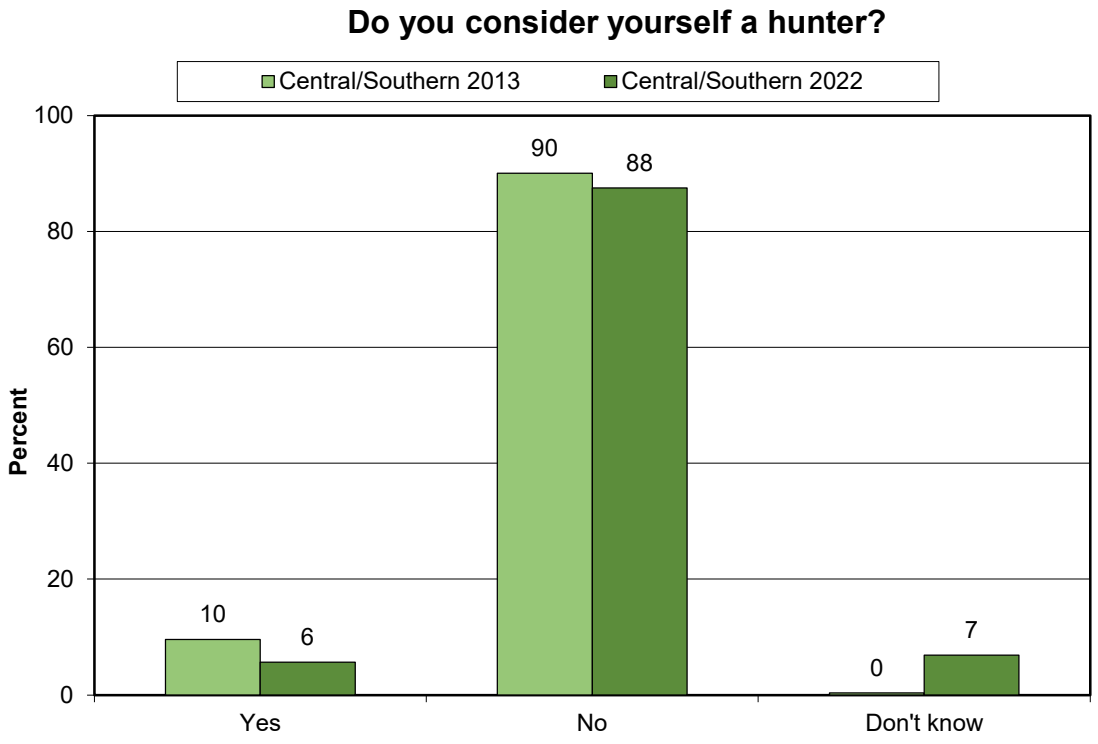


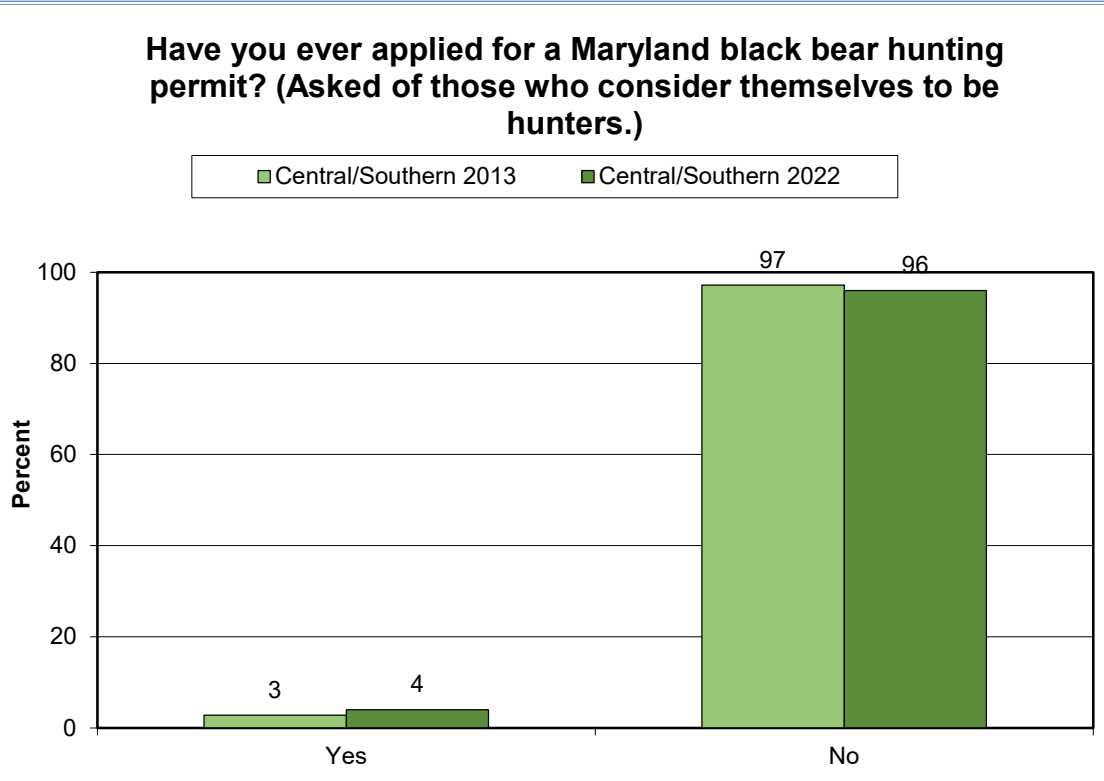
When black bear damage occurs to crops in Maryland, do you agree or disagree that the property owner should be compensated for the damages?



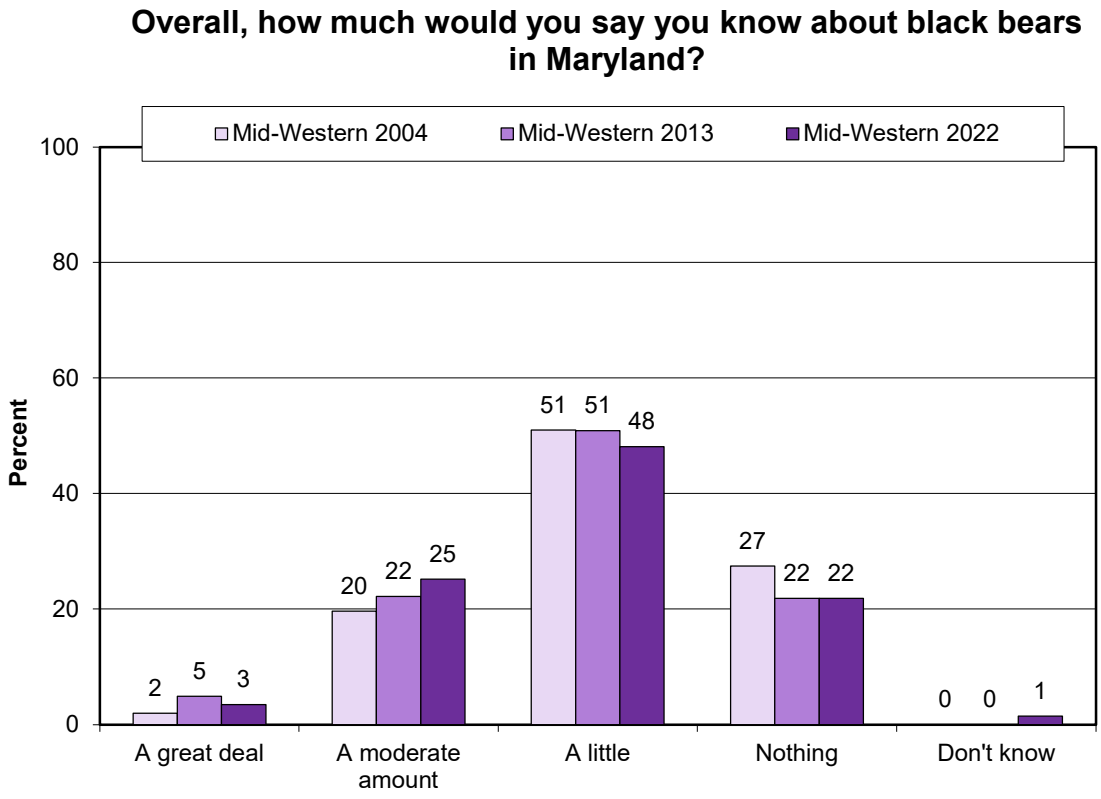
Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?

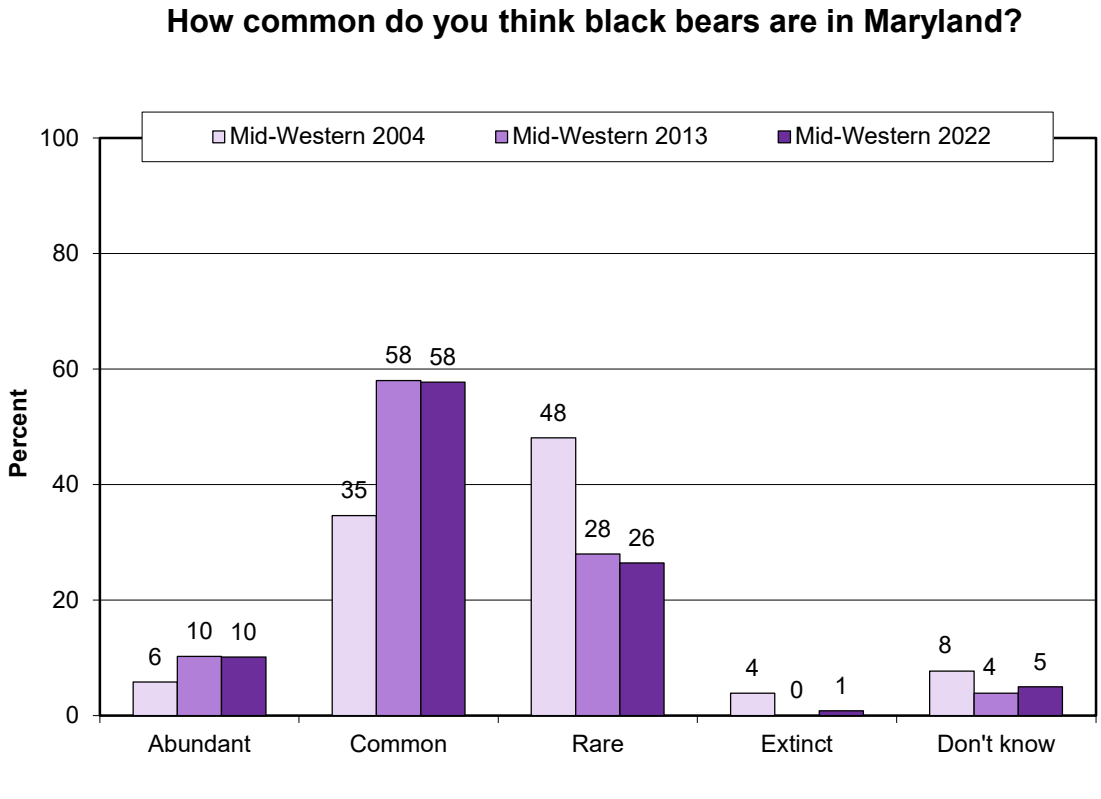



Do you consider yourself a hunter?
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
10
6
90
88
0
7
Yes
No
Don't know

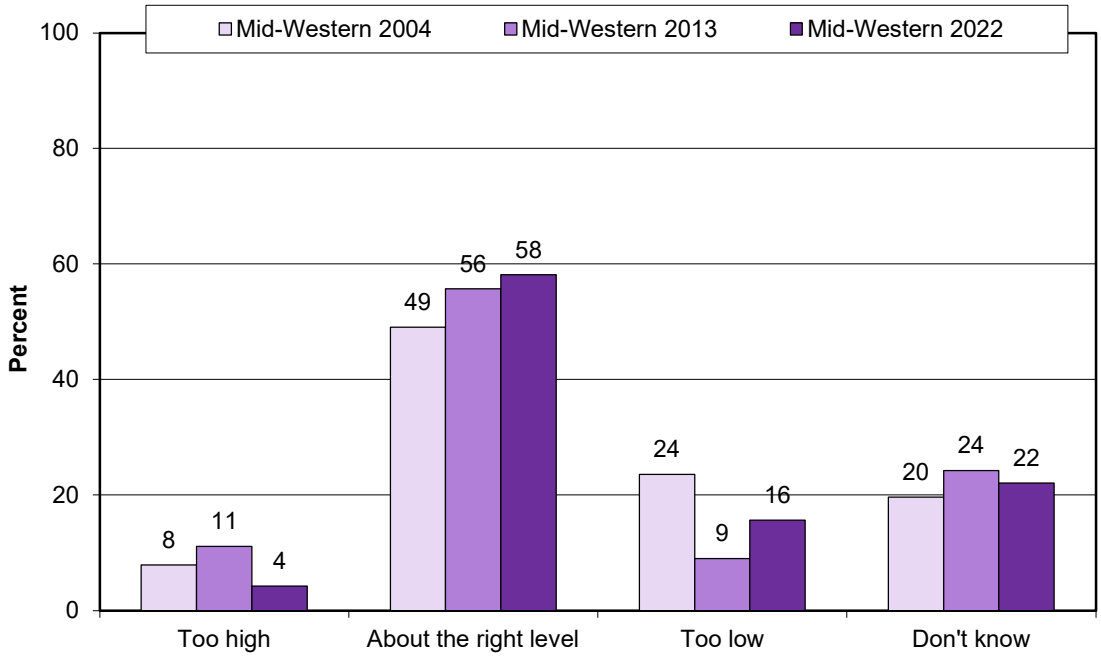

Have you ever applied for a Maryland black bear hunting permit? (Asked of those who consider themselves to be hunters.)
Central/Southern 2013
Central/Southern 2022
Percent
100
80
60
40
20
0
3
4
97
96
Yes
No

MID-WESTERN

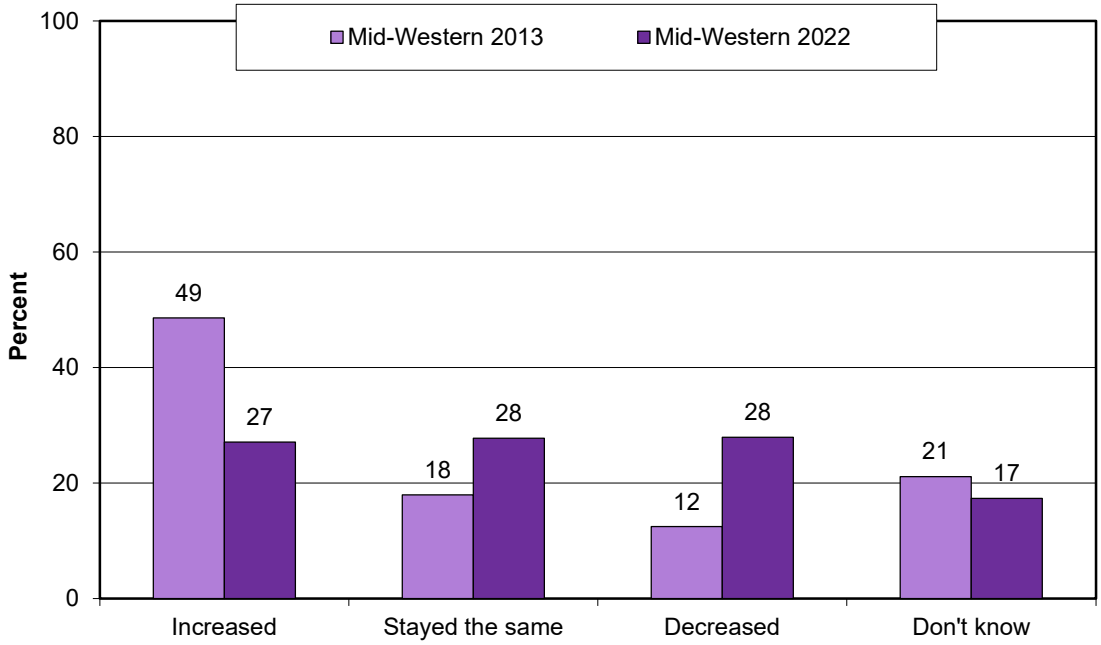

Overall, how much would you say you know about black bears in Maryland?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
2
5
3
20
22
25
51
51
48
27
22
22
0
0
1
A great deal
A moderate amount
A little
Nothing
Don't know

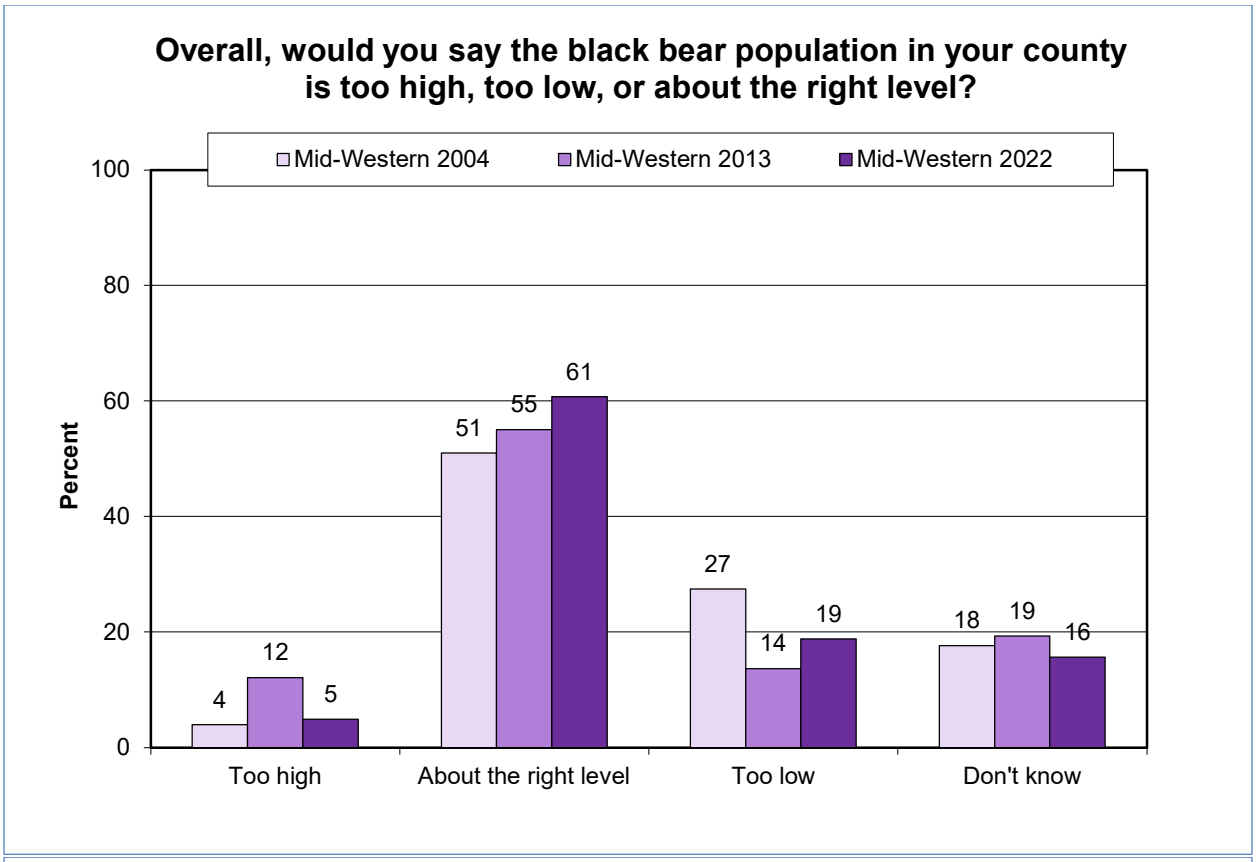

How common do you think black bears are in Maryland?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
6
10
10
35
58
58
48
28
26
4
0
1
8
4
5
Abundant
Common
Rare
Extinct
Don't know

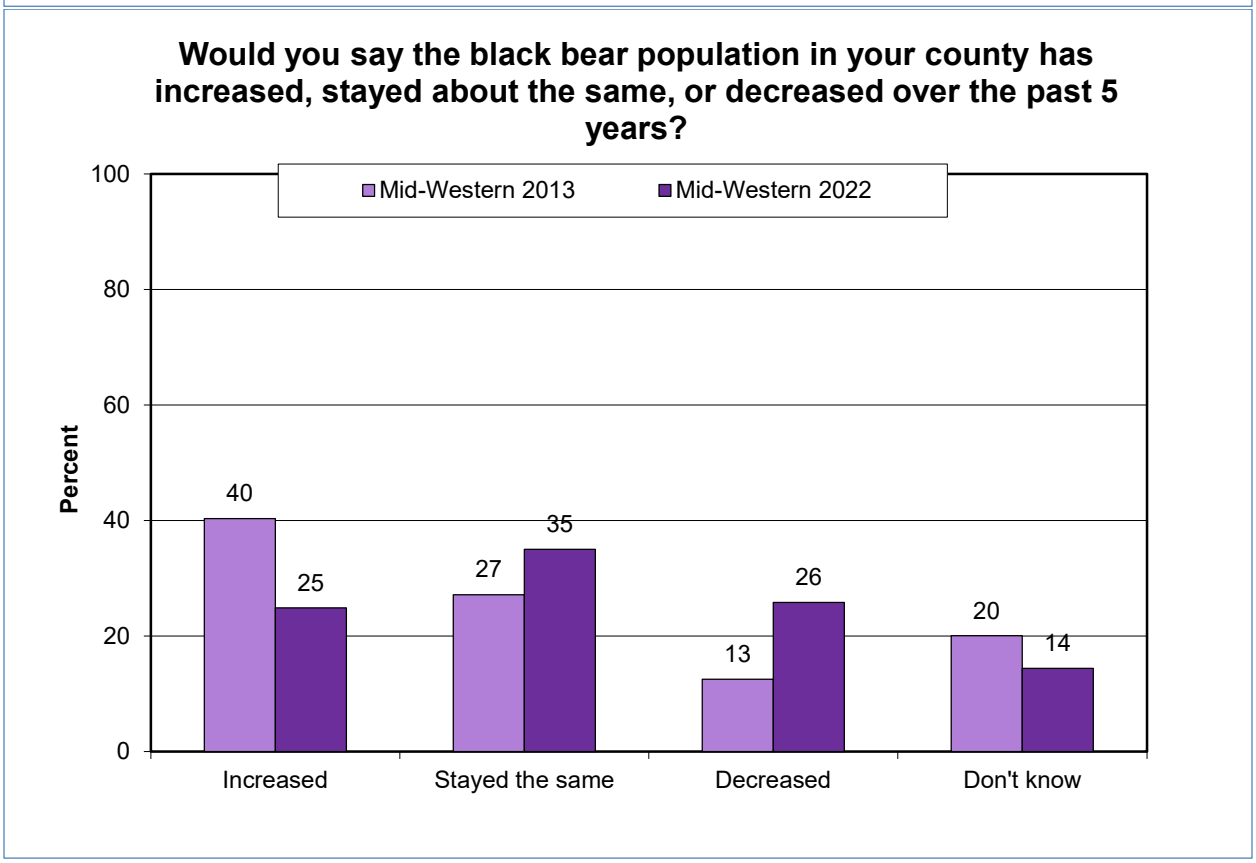
Overall, would you say the black bear population in Maryland is too high, too low, or about the right level?

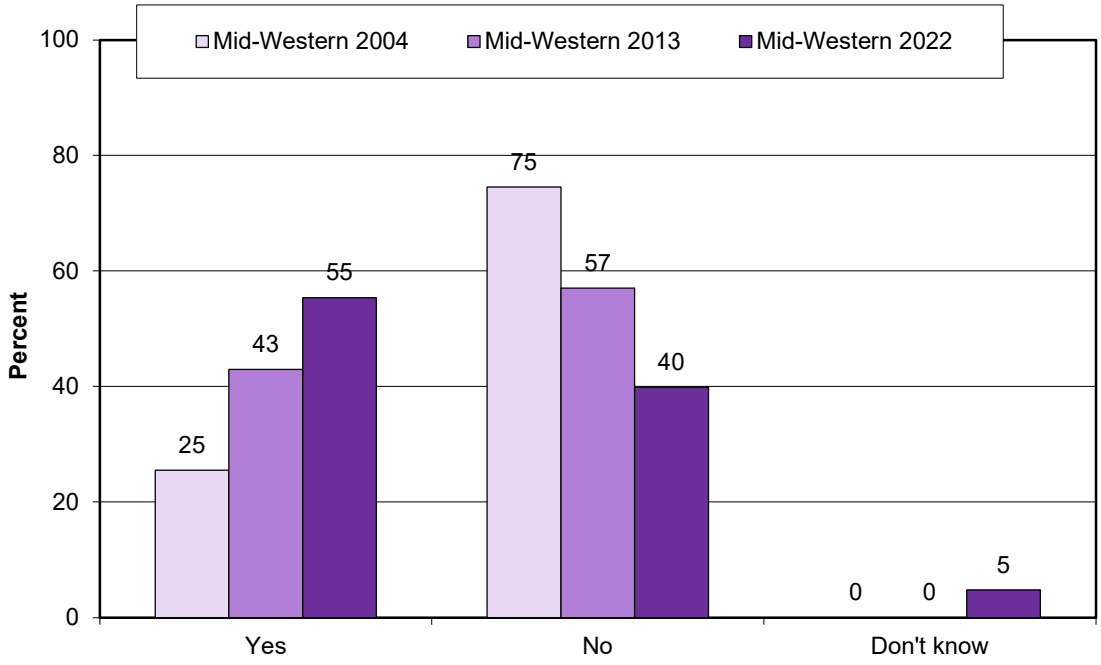


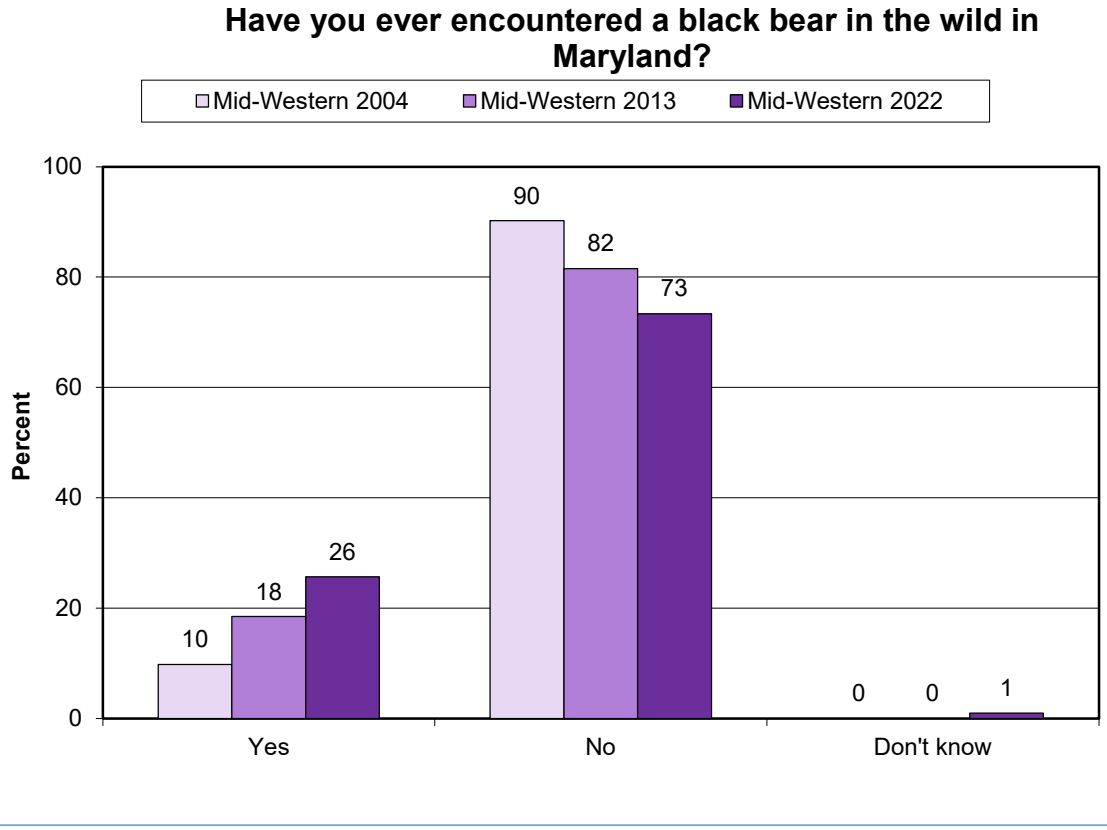
Would you say the black bear population in Maryland has increased, stayed about the same, or decreased over the past 5 years?

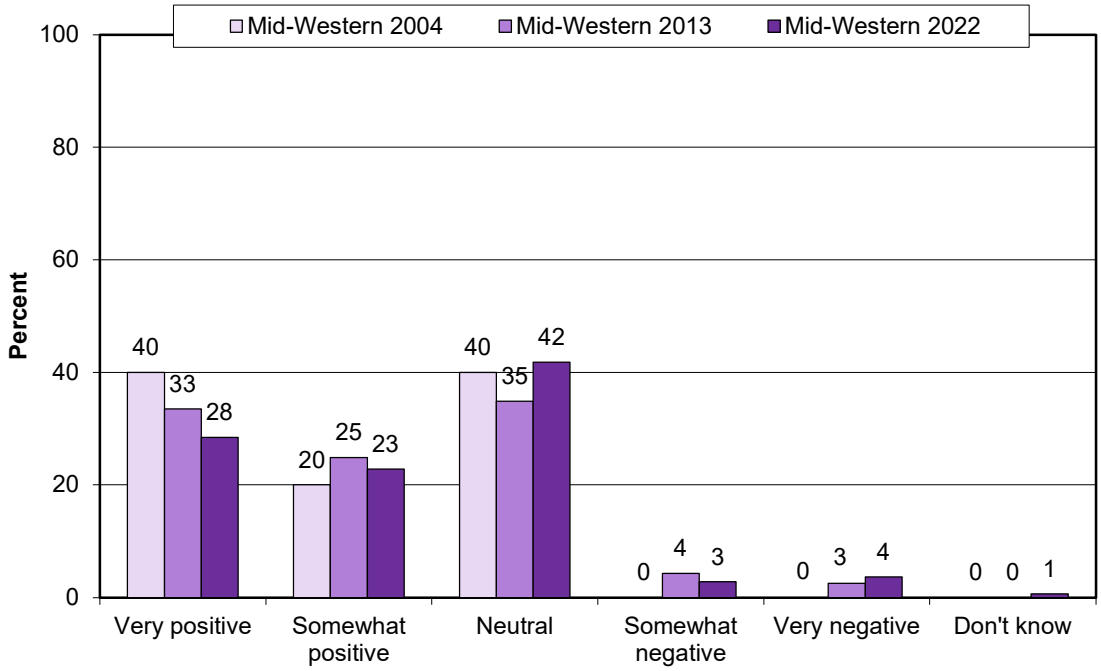


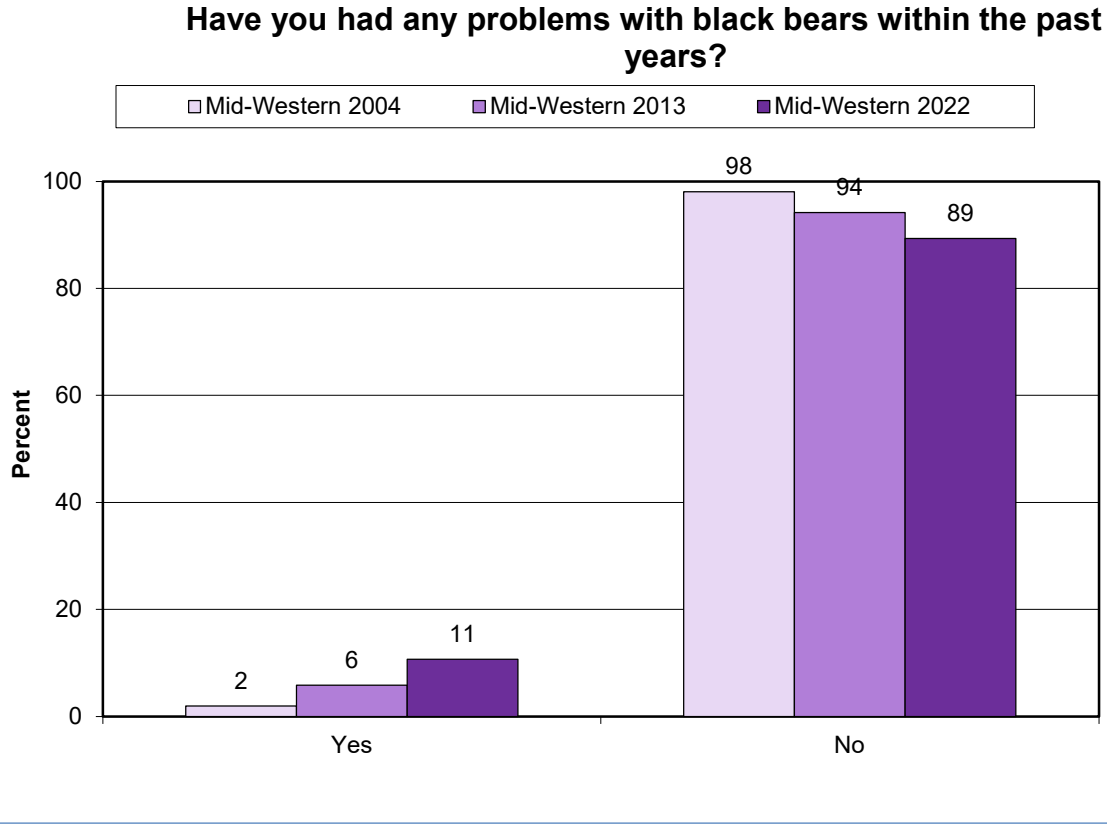

Overall, would you say the black bear population in your county is too high, too low, or about the right level?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
4
12
5
51
55
61
27
14
19
18
19
16
Too high
About the right level
Too low
Don't know


Would you say the black bear population in your county has increased, stayed about the same, or decreased over the past 5 years?
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
40
25
27
35
13
26
20
14
Increased
Stayed the same
Decreased
Don't know

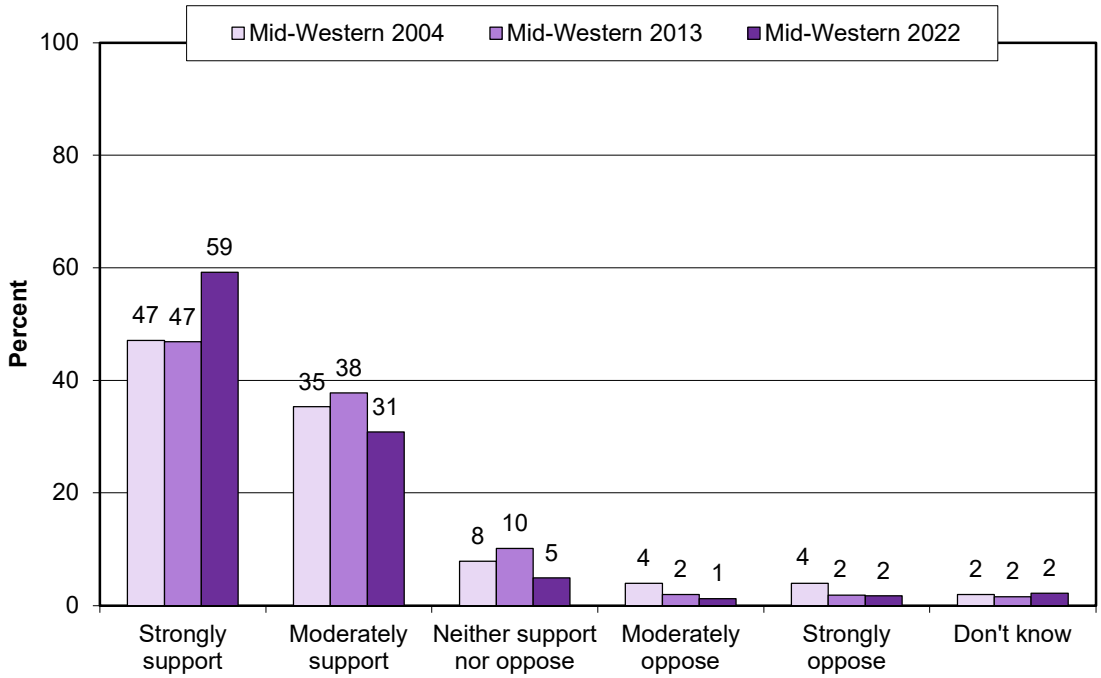

Have you ever seen evidence of a black bear in Maryland?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
25
43
55
75
57
40
0
0
5
Yes
No
Don't know


Have you ever encountered a black bear in the wild in Maryland?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
10
18
26
90
82
73
0
0
1
Yes
No
Don't know

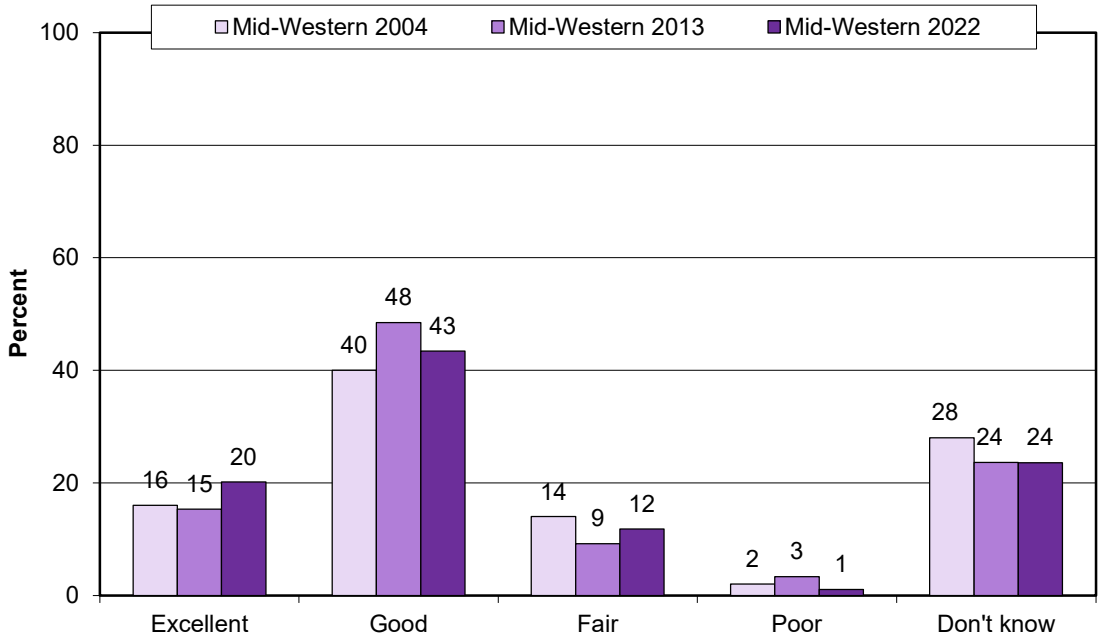

When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who encountered a black bear.)
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
40
33
28
20
25
23
40
35
42
0
4
3
0
3
4
0
0
1
Very positive
Somewhat positive
Neutral
Somewhat negative
Very negative
Don't know


Have you had any problems with black bears within the past two years?
Mid-Western 2004
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
2
6
11
98
94
89
Yes
No

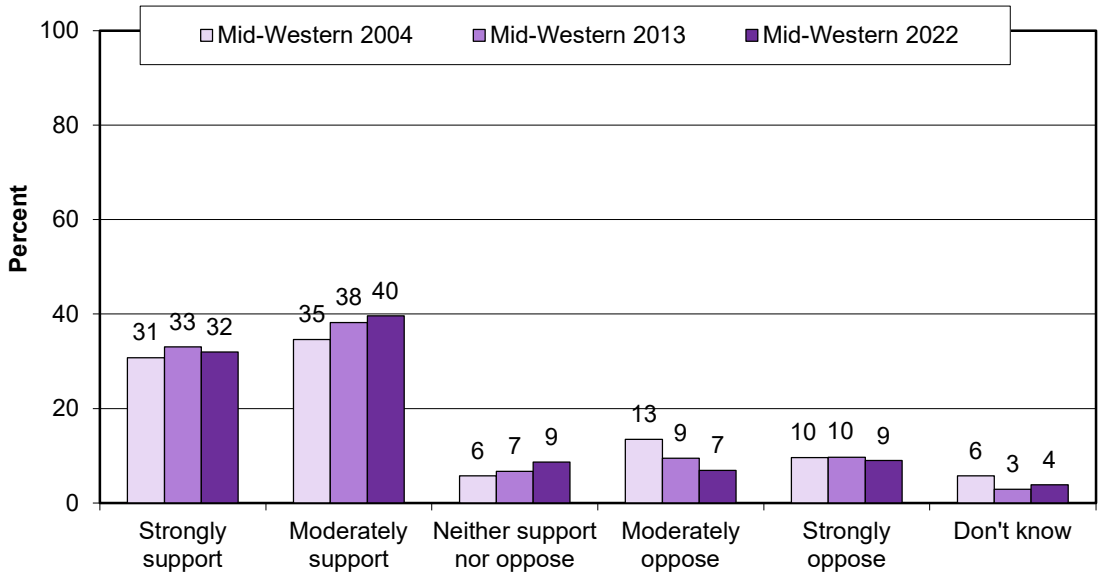
In general, do you support or oppose having black bears in Maryland?



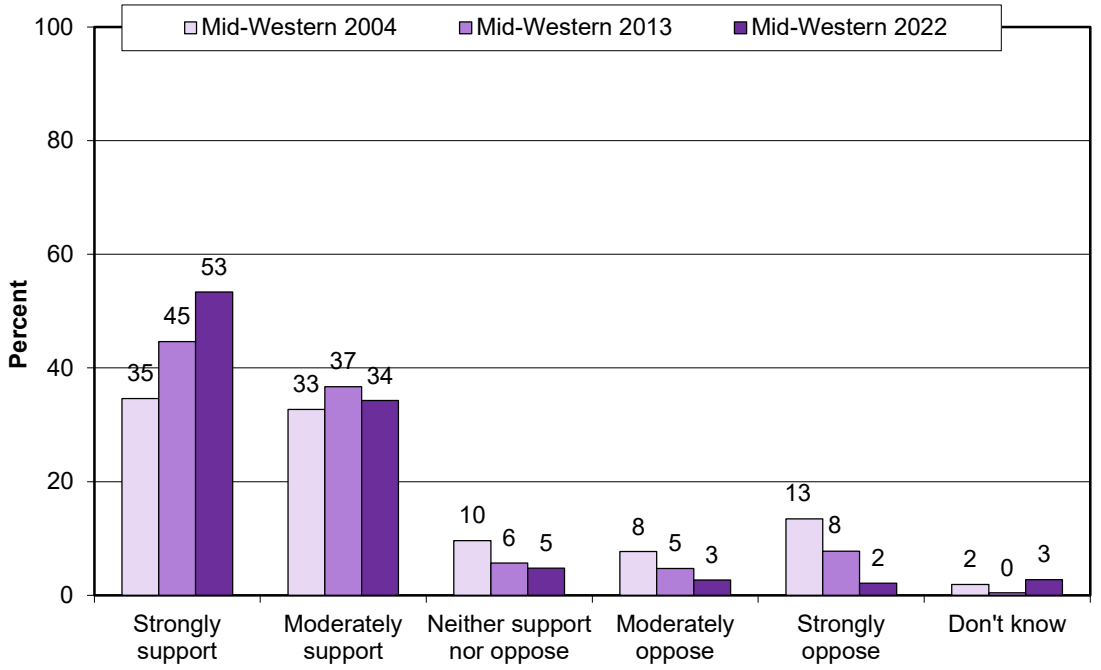
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?



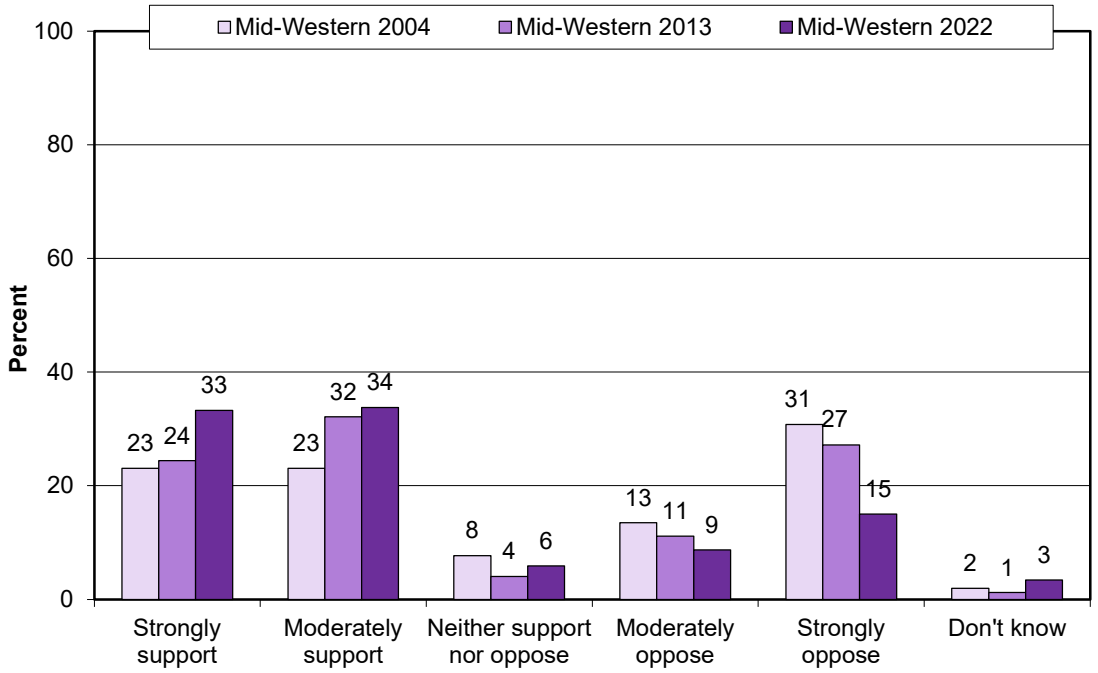
For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?



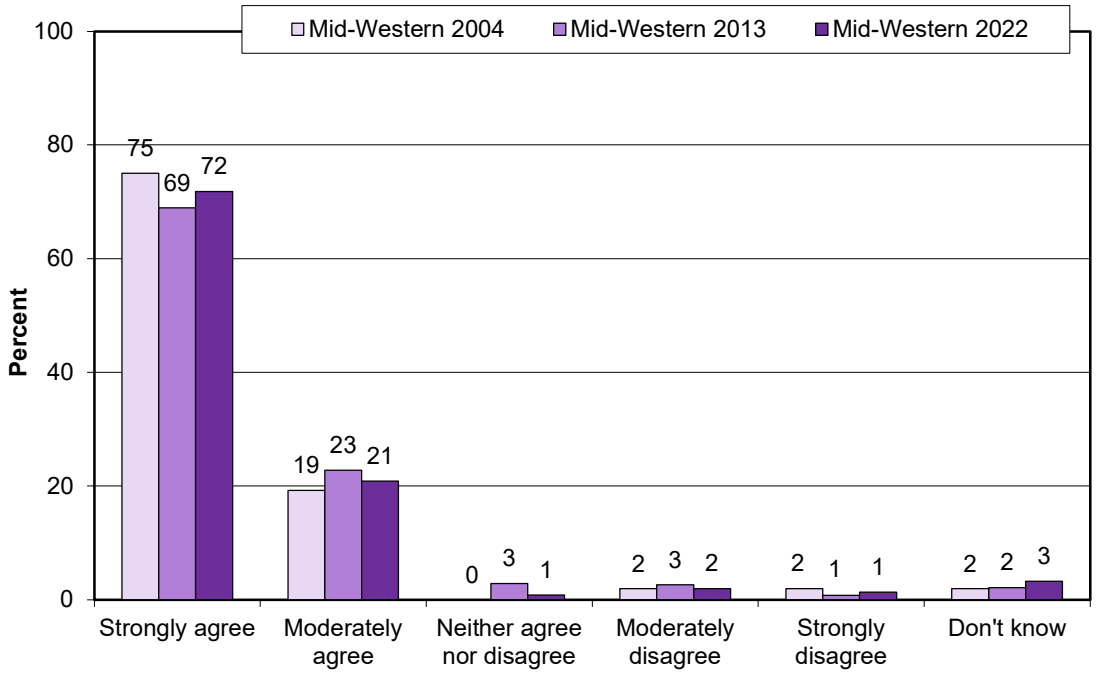
Would you support or oppose having black bears in your county?



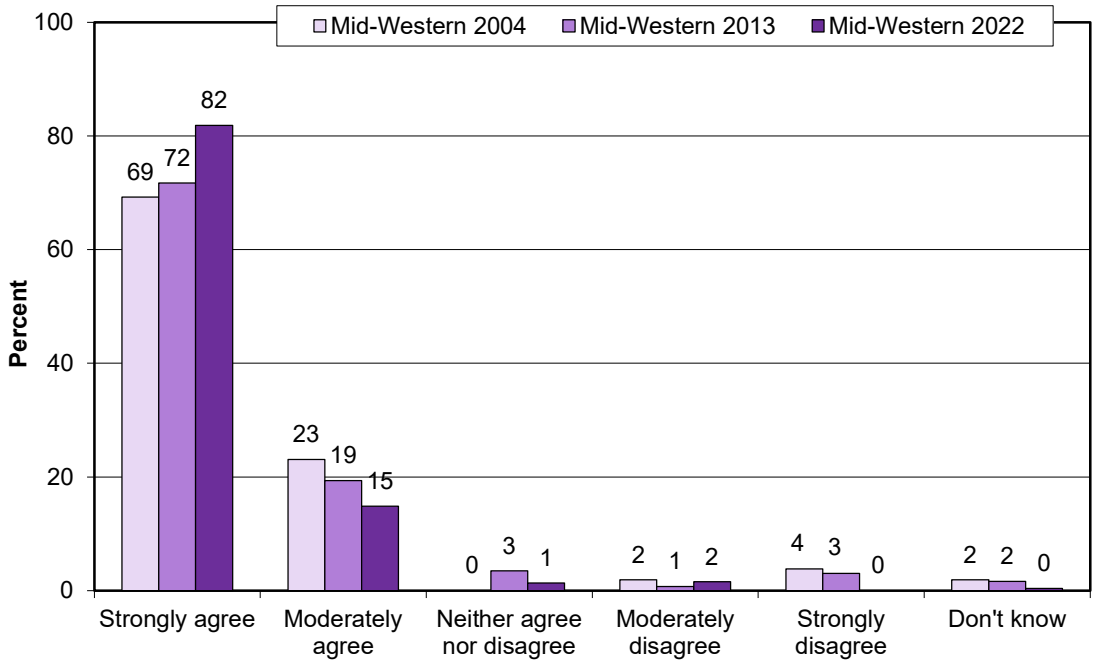
Would you support or oppose having black bears within 1/2 mile of your home?



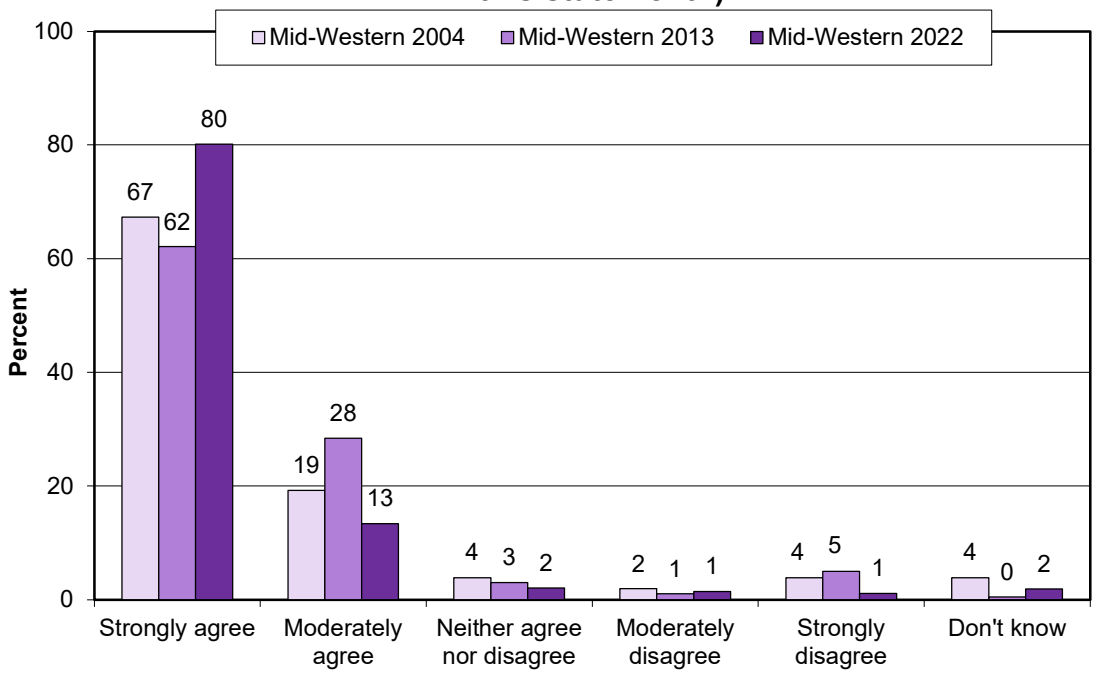
Preserving habitat on which black bears depend is important. (Do you agree or disagree with this statement?)



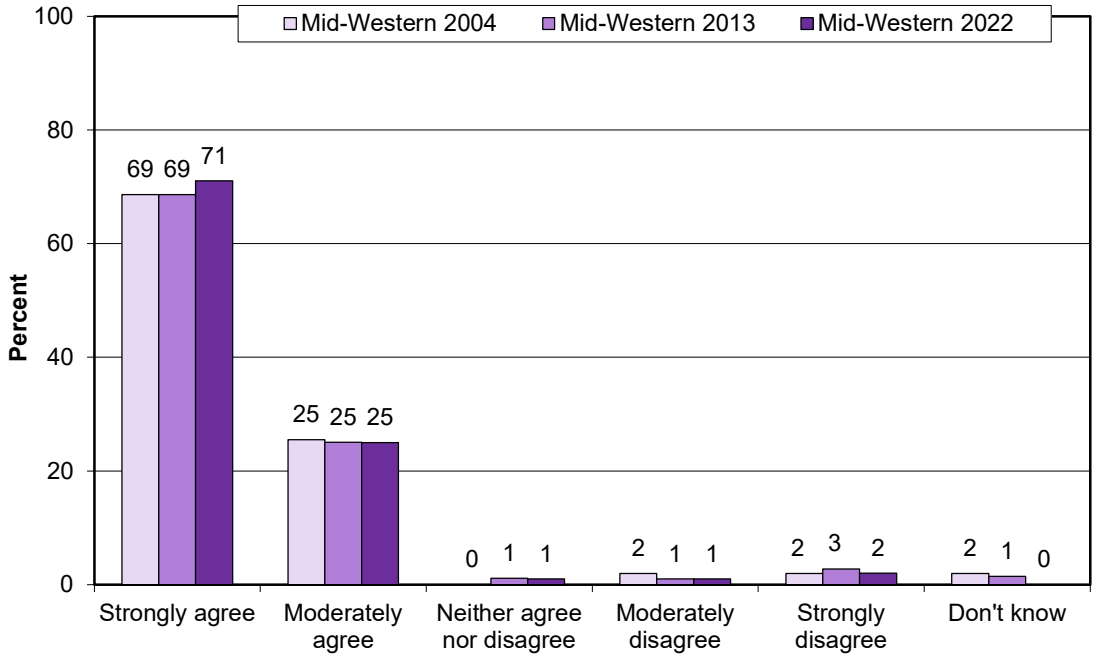
Black bears should be preserved in Maryland for future generations. (Do you agree or disagree with this statement?)



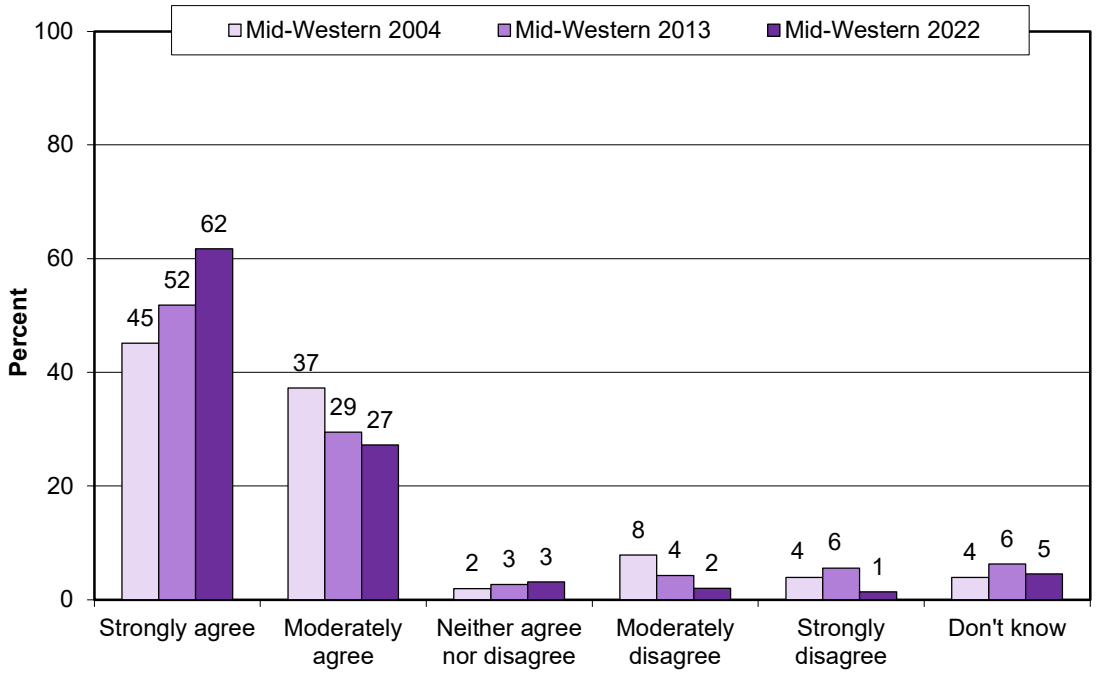
Although I may never see one, I derive satisfaction just knowing black bears exist in Maryland. (Do you agree or disagree with this statement?)



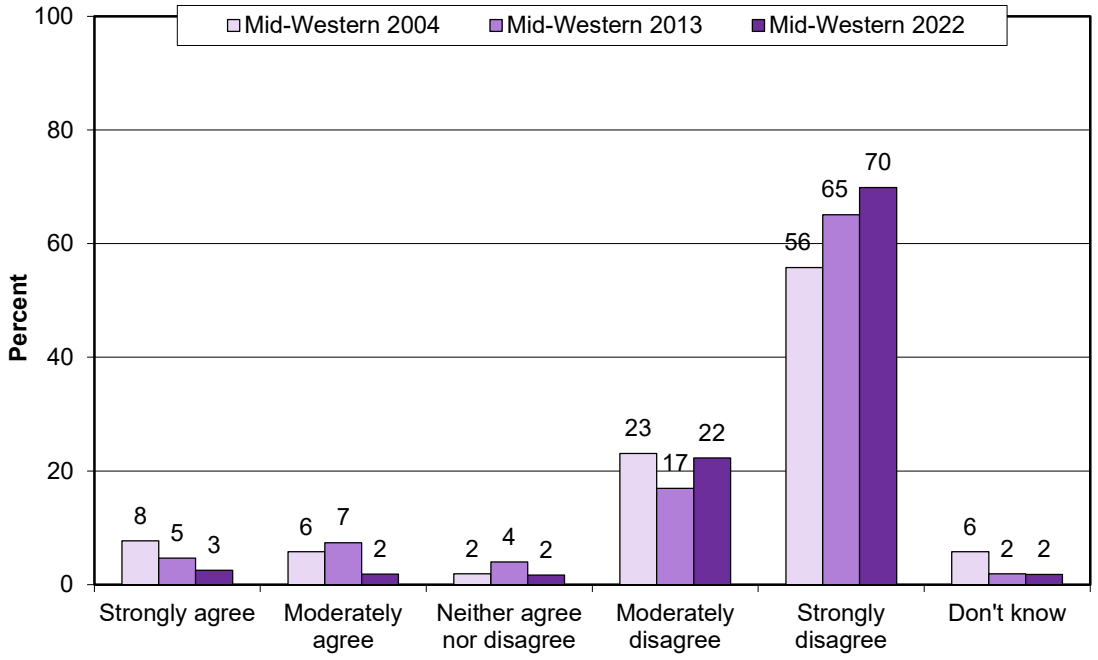
Black bears have an inherent right to live in Maryland. (Do you agree or disagree with this statement?)



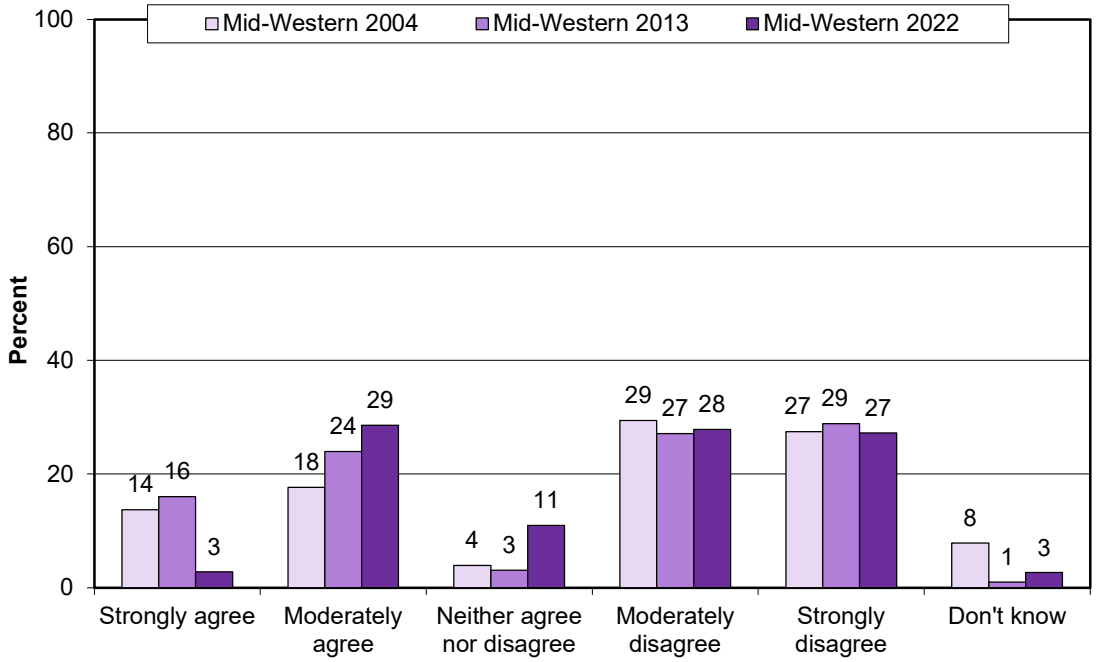
Black bears are an important and essential part of Maryland's ecosystem. (Do you agree or disagree with this statement?)



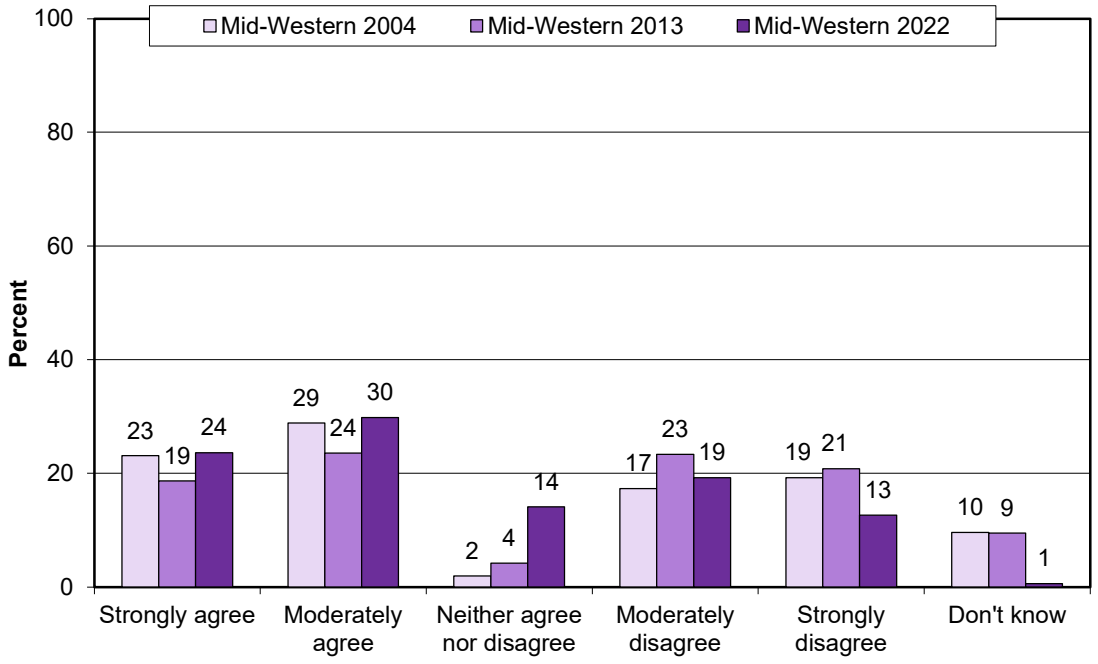
There is no need for black bears in Maryland. (Do you agree or disagree with this statement?)



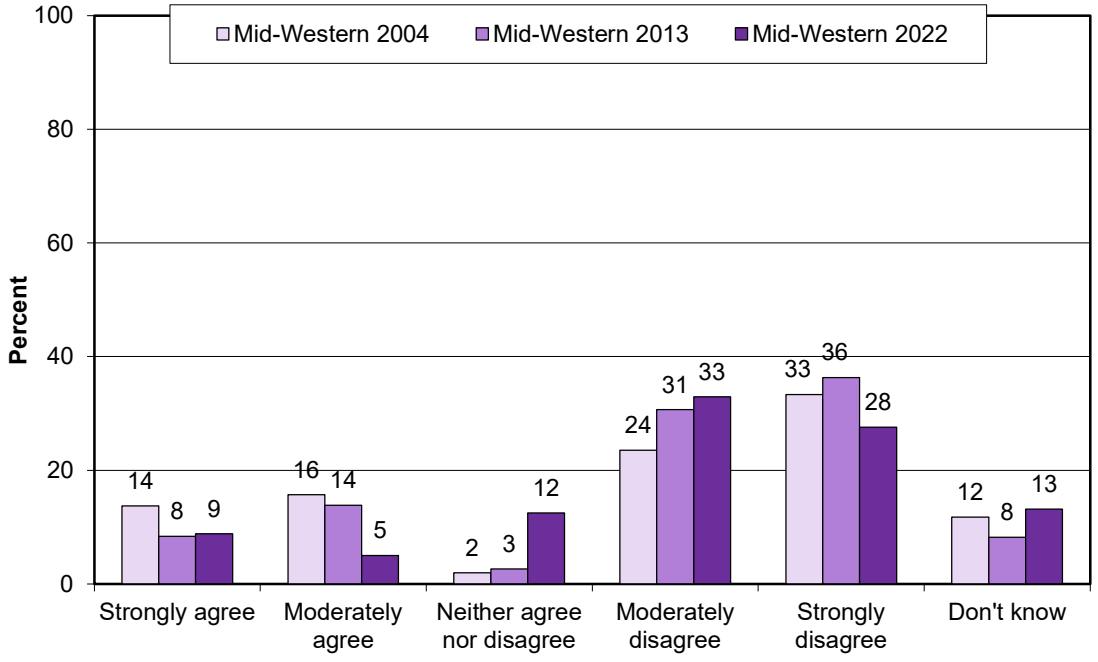
Black bears in Maryland are dangerous to humans. (Do you agree or disagree with this statement?)



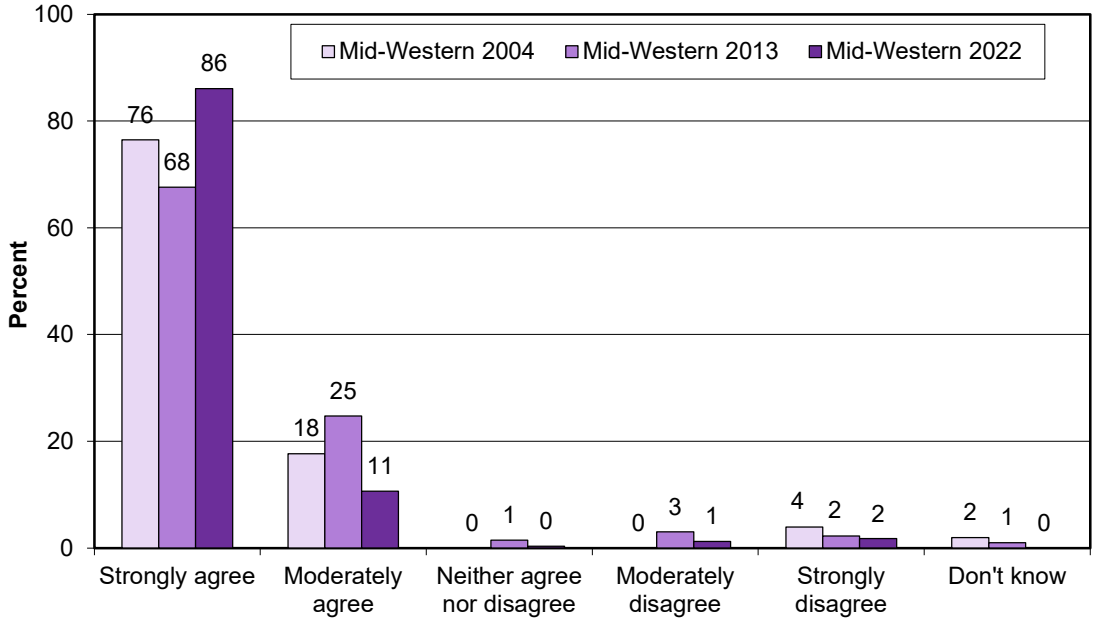
Black bears will frequently enter into populated areas in Maryland. (Do you agree or disagree with this statement?)



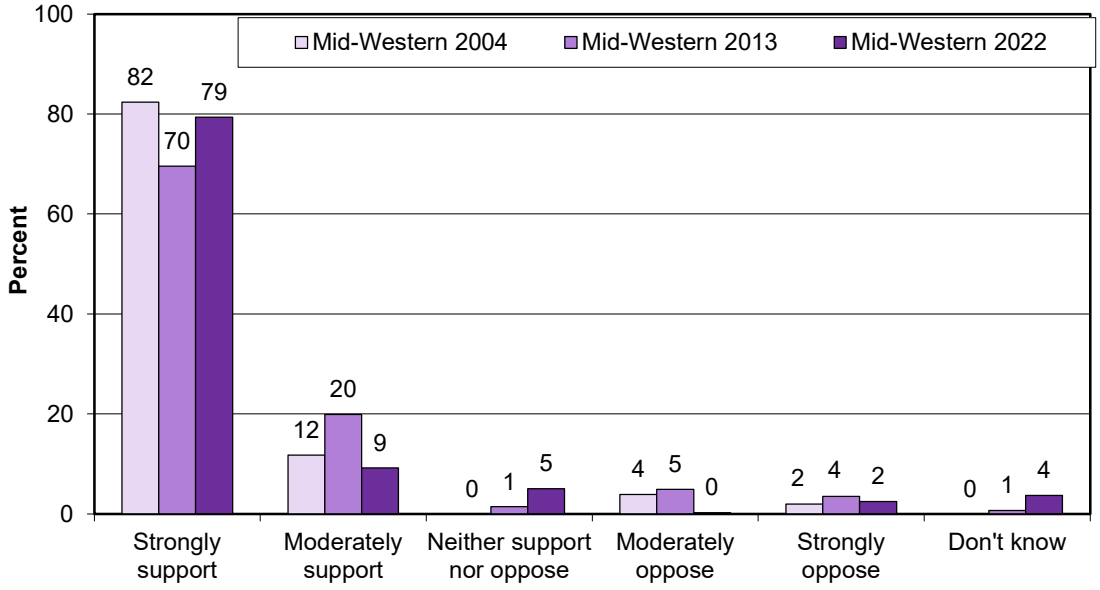
Black bears will kill many livestock and pets in Maryland. (Do you agree or disagree with this statement?)



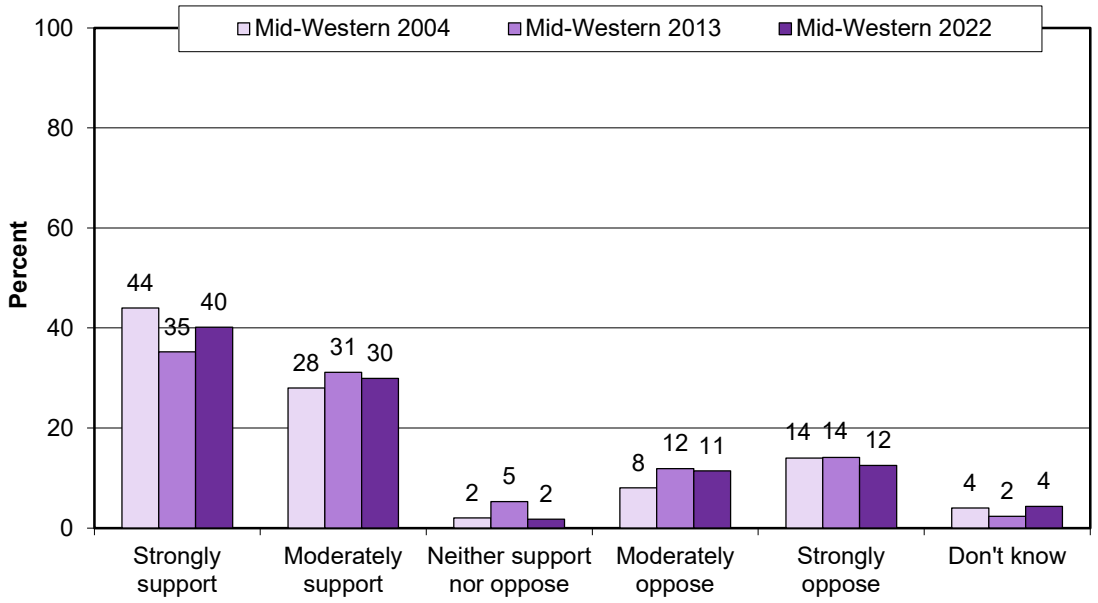
Most problems with black bears in Maryland can be prevented by taking a few simple precautions, such as using bear proof trash containers. (Do you agree or disagree with this statement?)



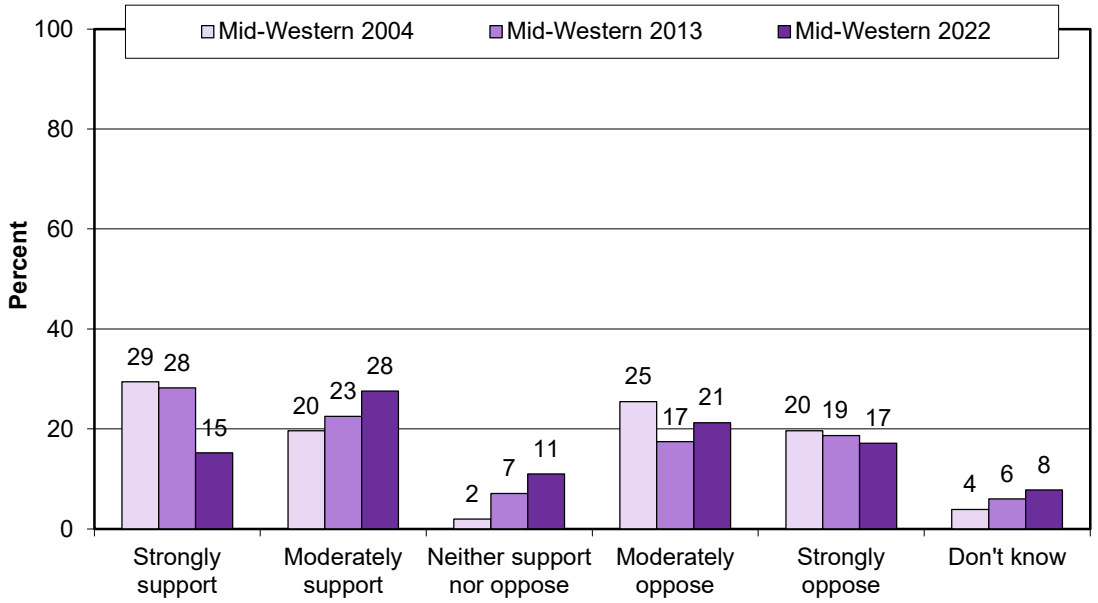
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas. (Would you support or oppose this?)



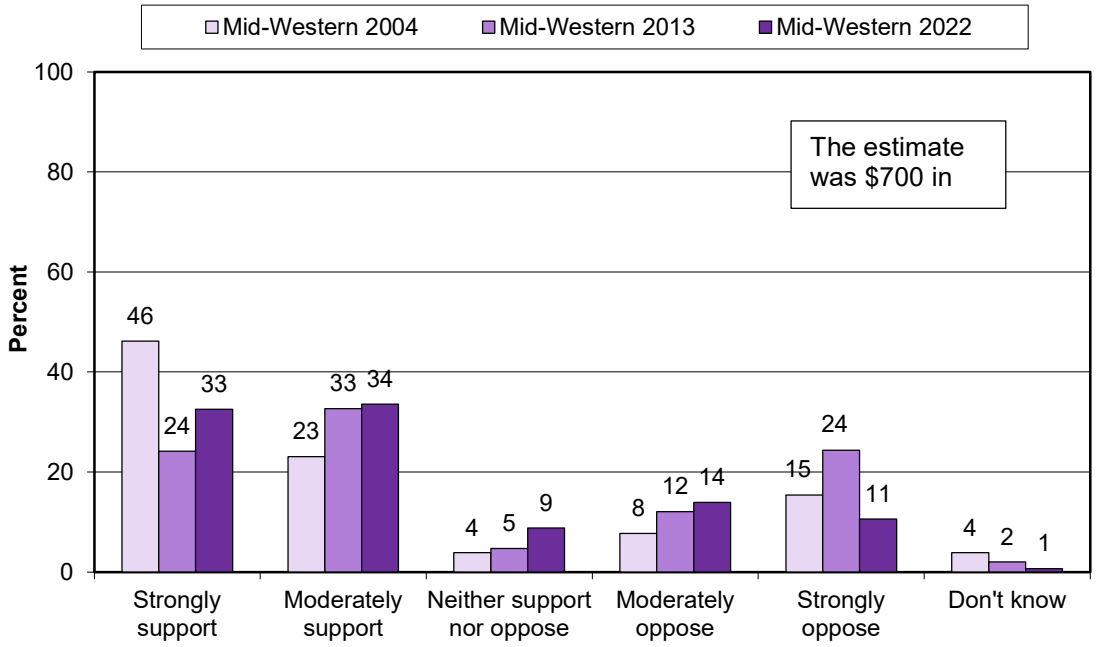
The use of electric fencing around small area bear attractants, such as beehives and aviaries. (Would you support or oppose this?)



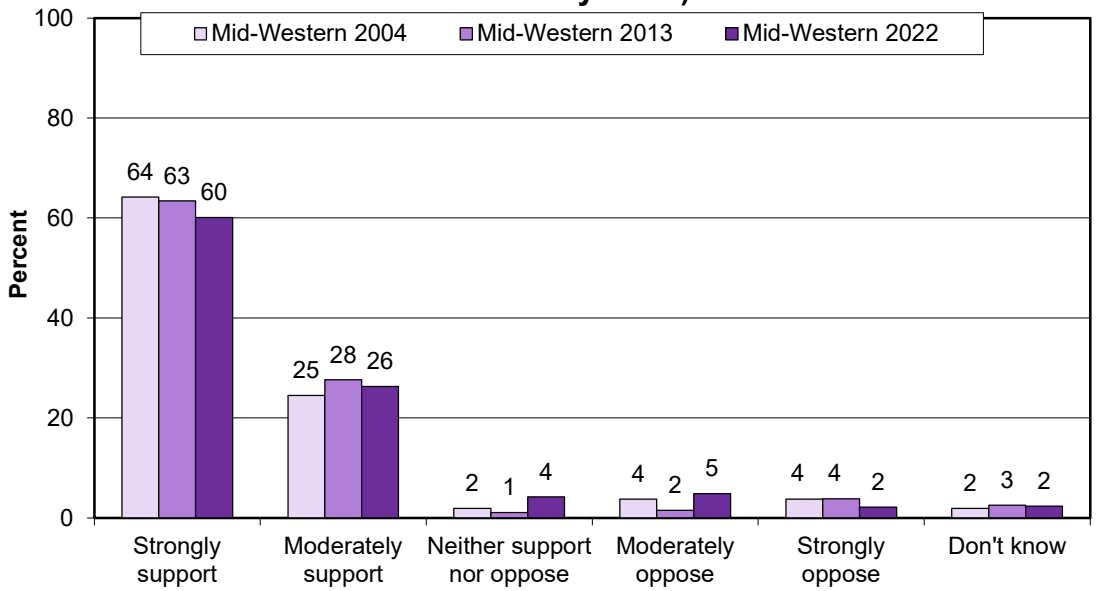
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities. (Would you support or oppose this?)



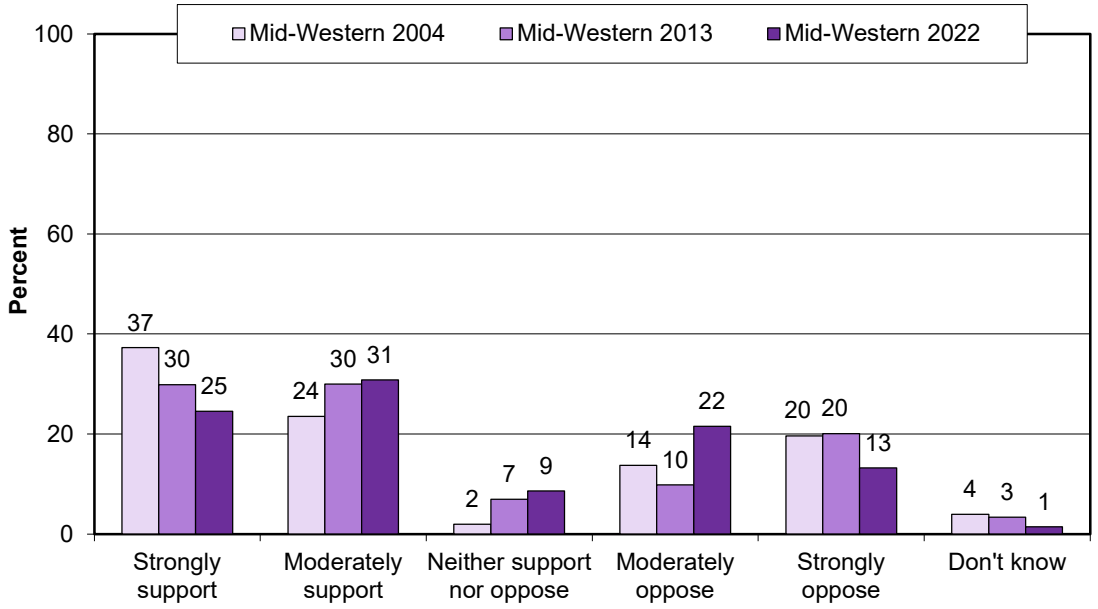
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more. (Would you support or oppose this?)



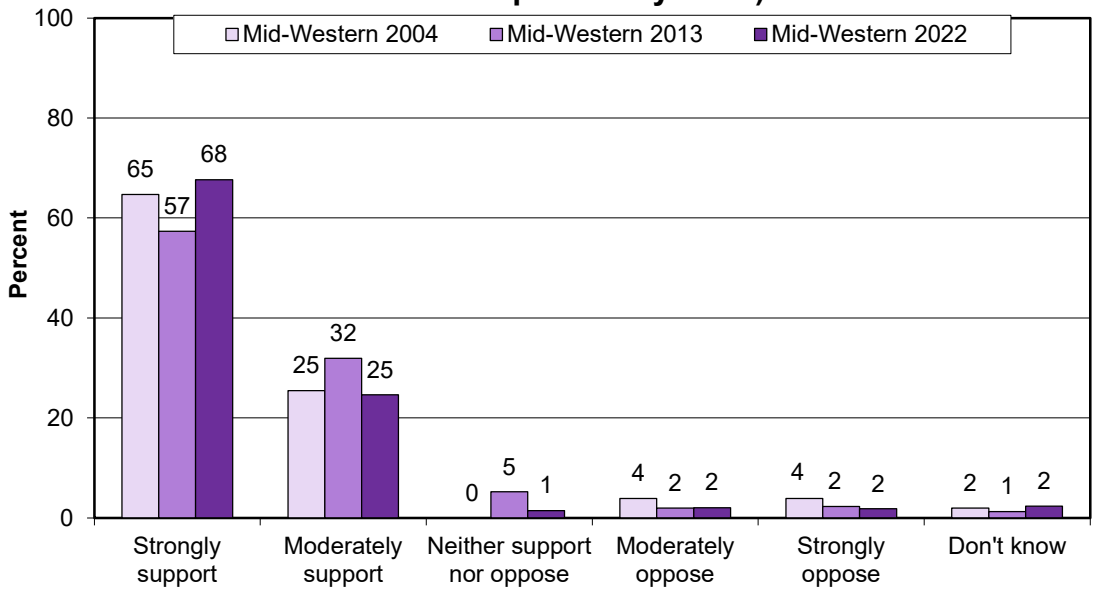
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



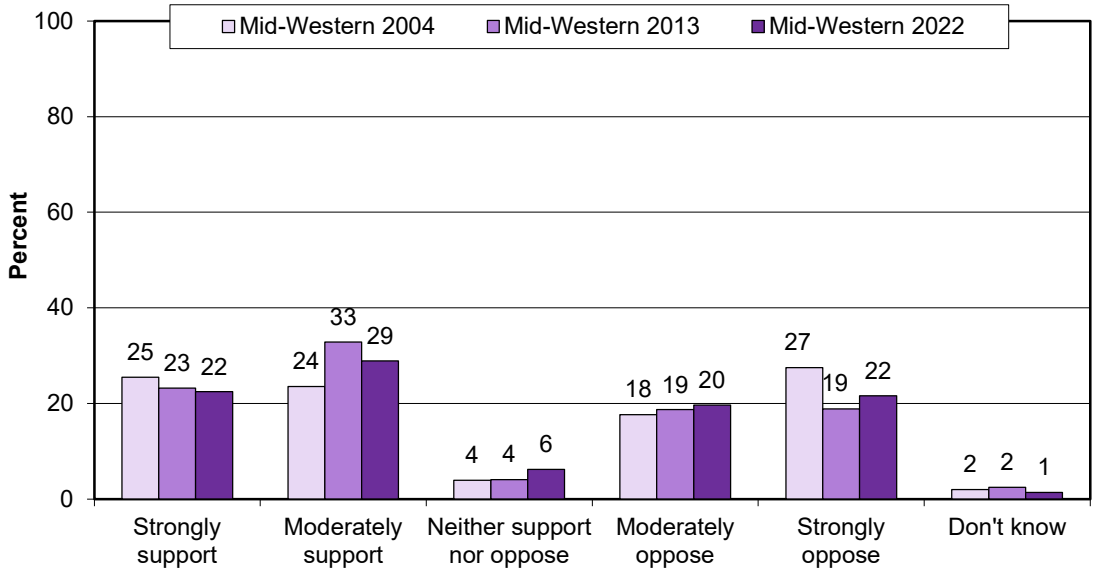
The DNR issuing depredation (kill) permits for black bears. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



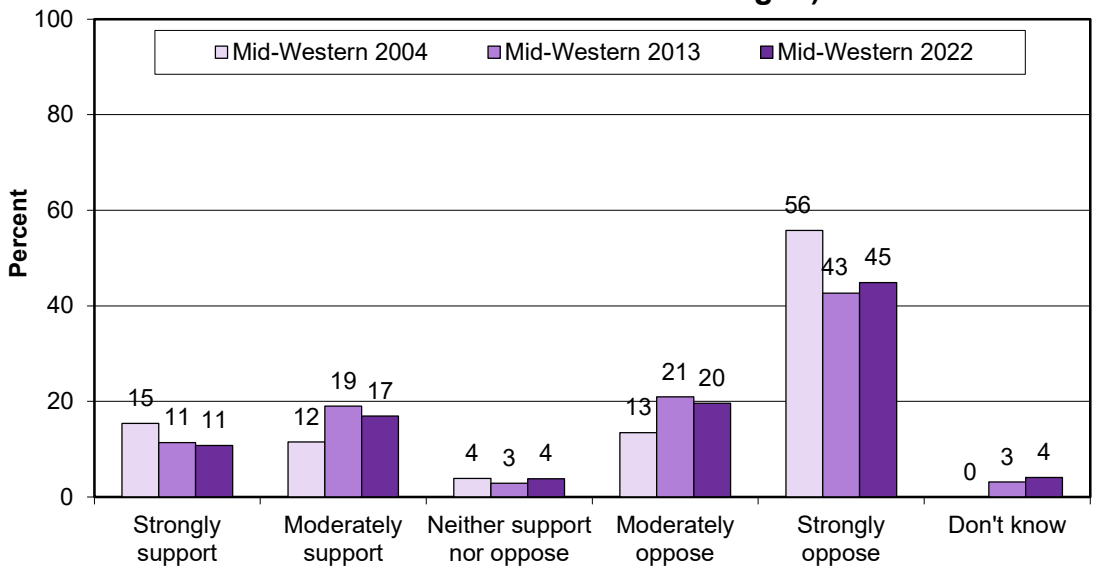
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)



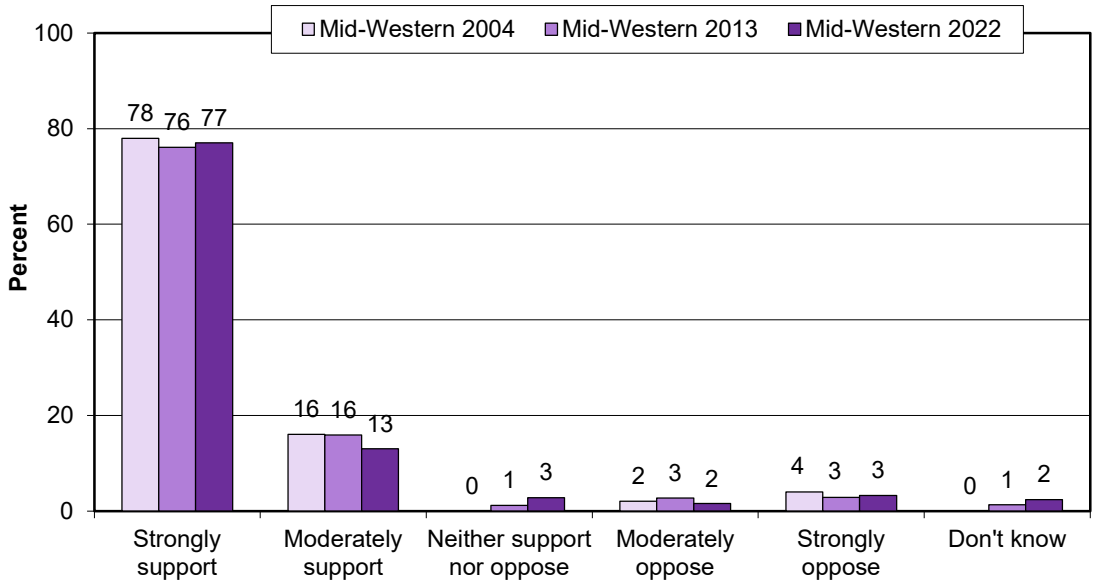
The DNR issuing depredation (kill) permits for black bears that cause damage to personal property or destruction of crops, resulting in a monetary loss for farmers in Maryland. (Do you support or oppose this to resolve situations with bears that cause damage?)



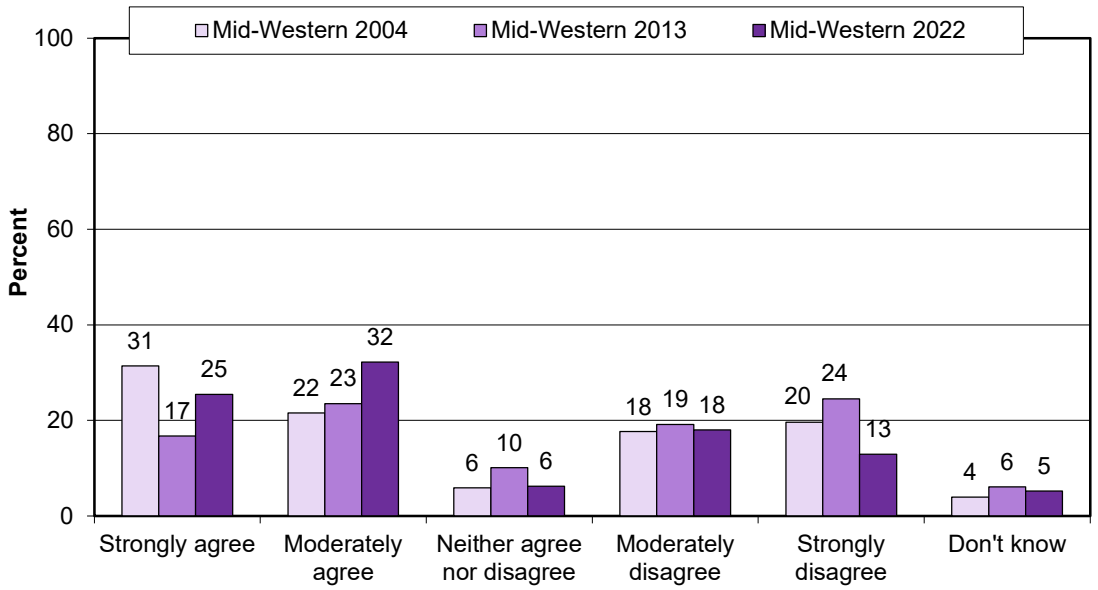
Allowing private citizens to kill bears that are causing damage to personal property or destruction of crops resulting in a monetary loss for farmers without first obtaining a depredation (kill) permit from the DNR. (Do you support or oppose this to resolve situations with bears that cause damage?)



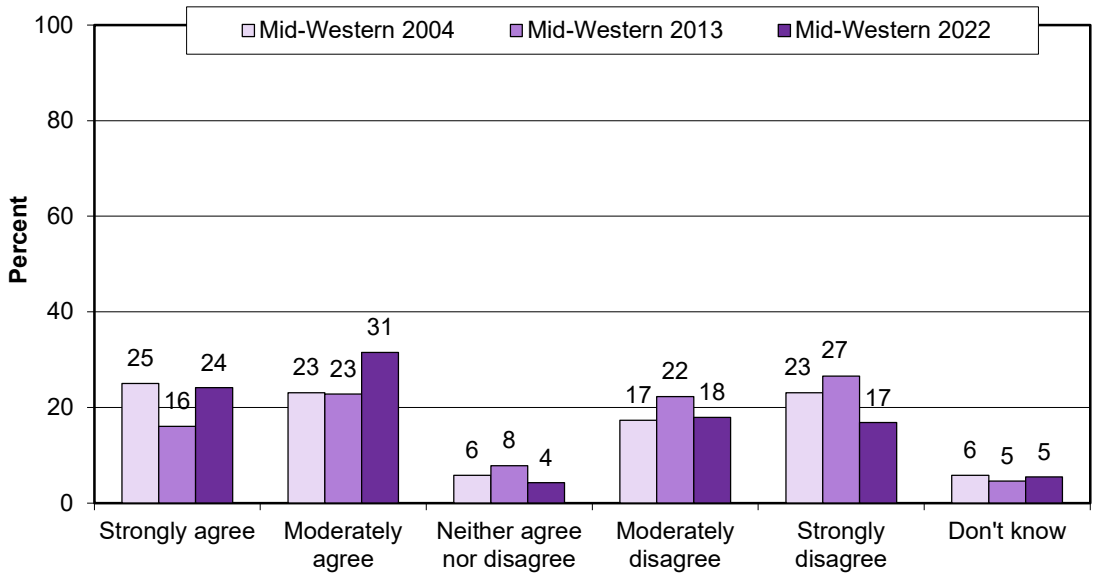
Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition for black bears that threaten human safety in Maryland?



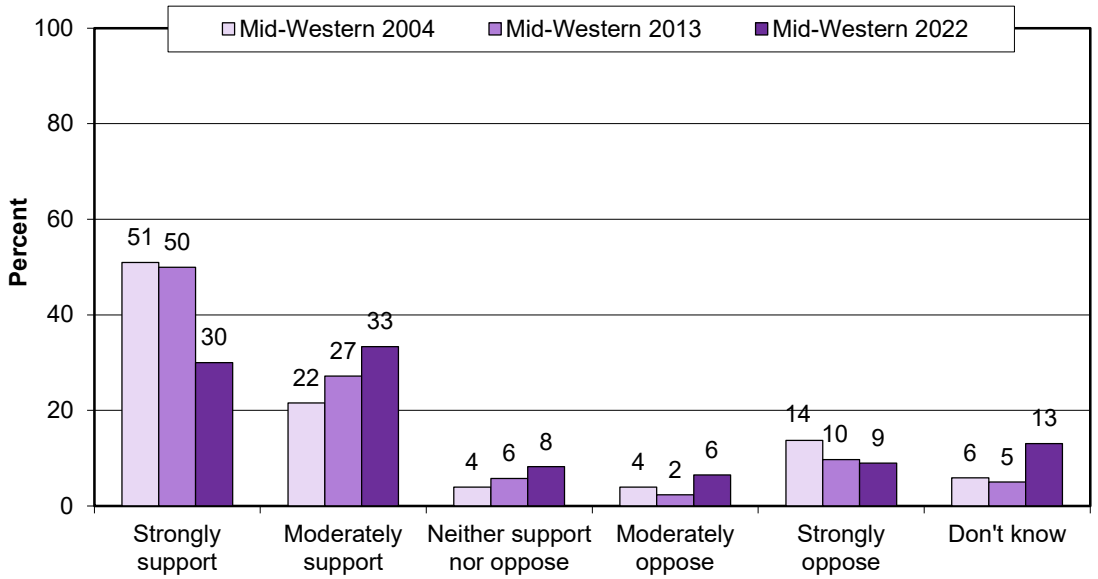
When black bear damage occurs to livestock in Maryland, do you agree or disagree that the property owner should be compensated for the damages?

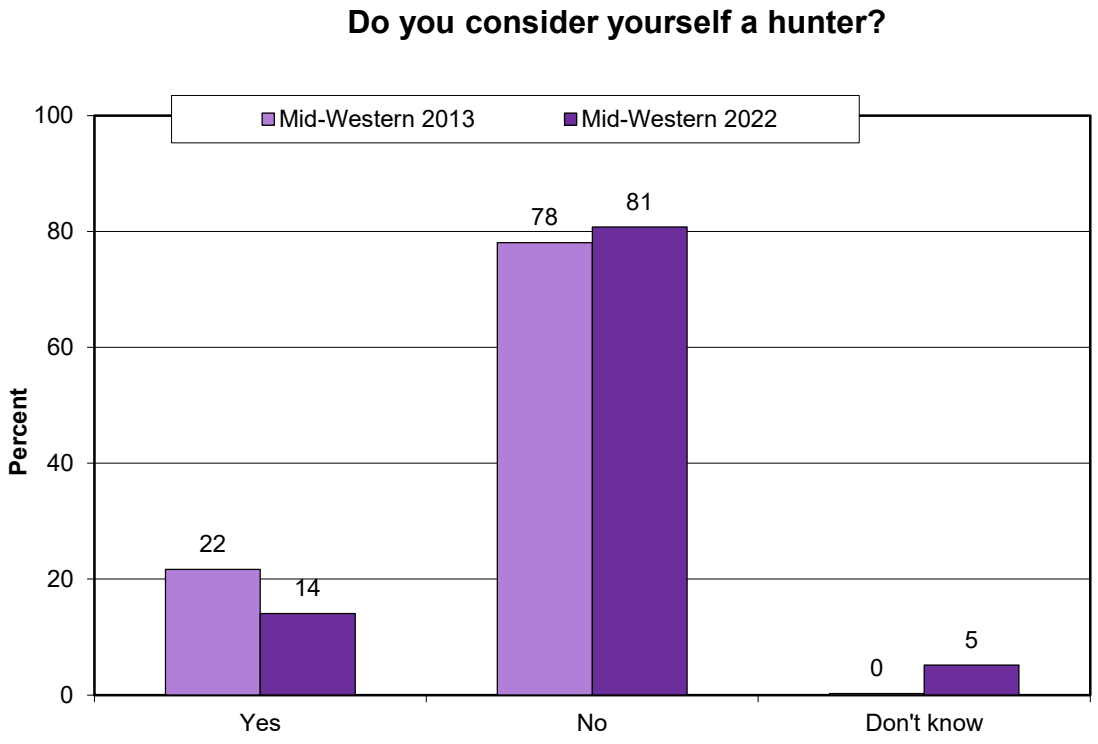


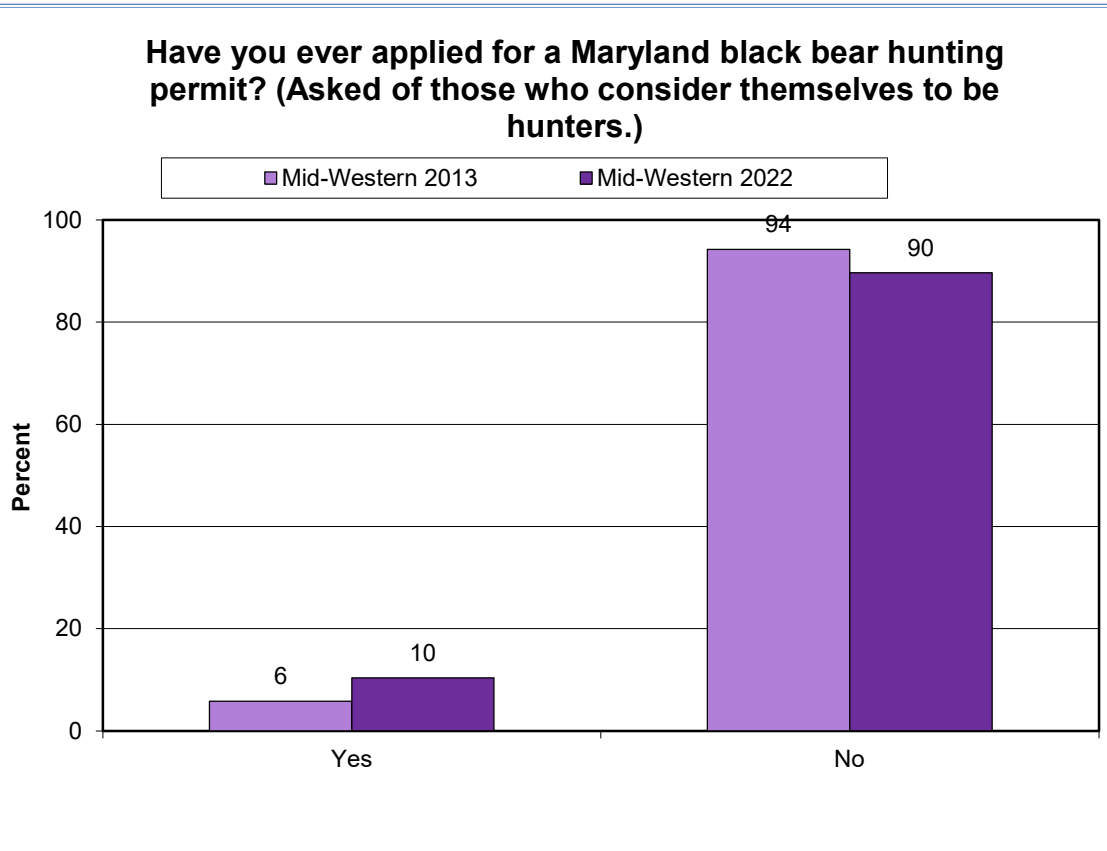
When black bear damage occurs to crops in Maryland, do you agree or disagree that the property owner should be compensated for the damages?



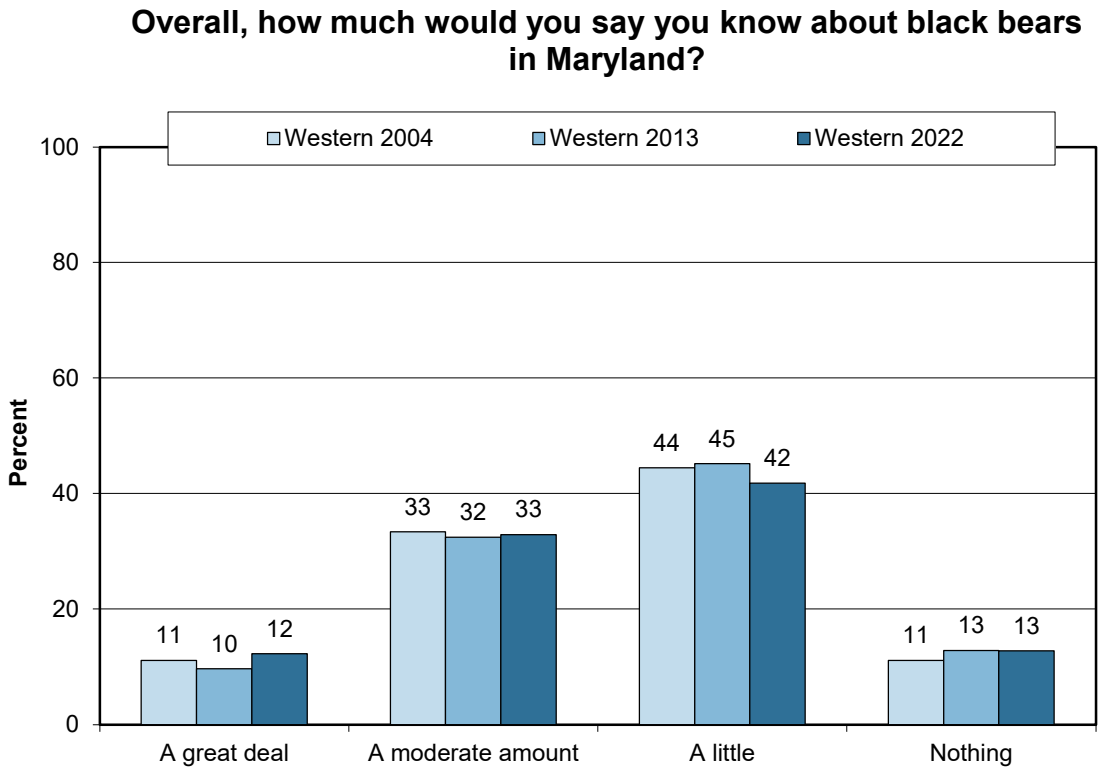
Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?

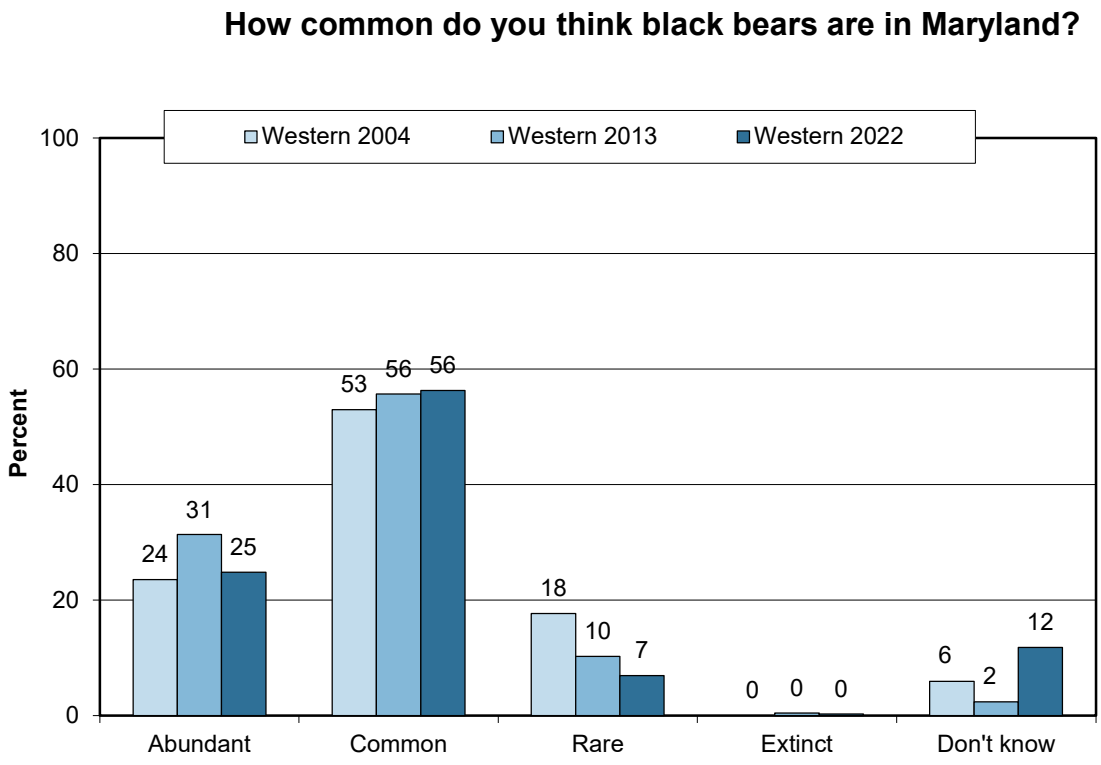



Do you consider yourself a hunter?
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
22
14
78
81
0
5
Yes
No
Don't know

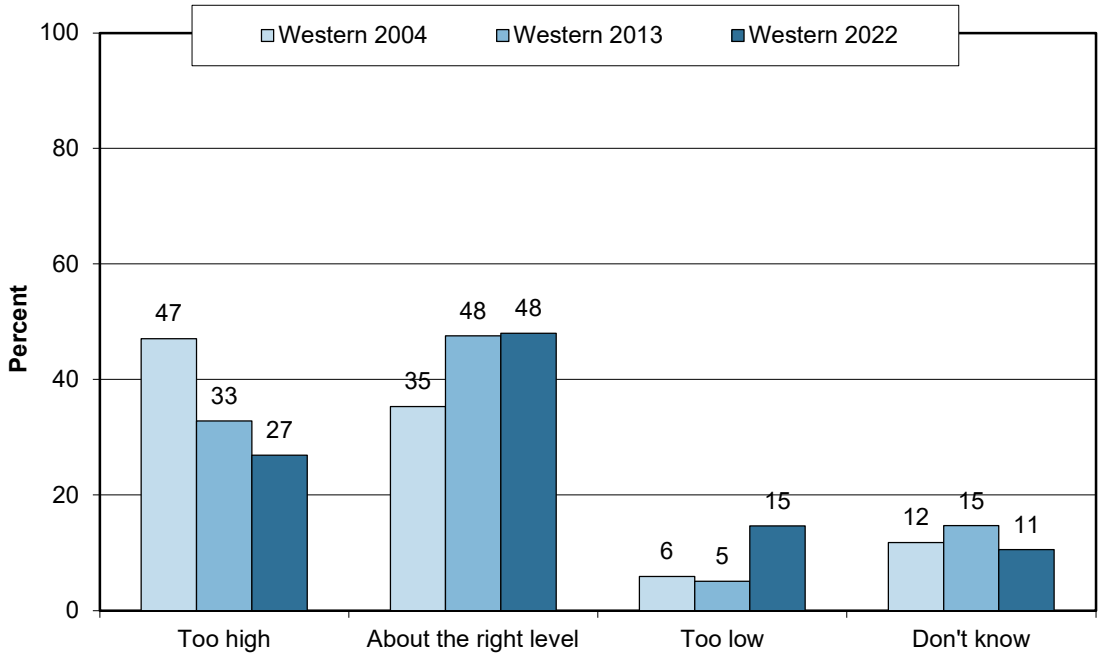

Have you ever applied for a Maryland black bear hunting permit? (Asked of those who consider themselves to be hunters.)
Mid-Western 2013
Mid-Western 2022
Percent
100
80
60
40
20
0
6
10
94
90
Yes
No

WESTERN

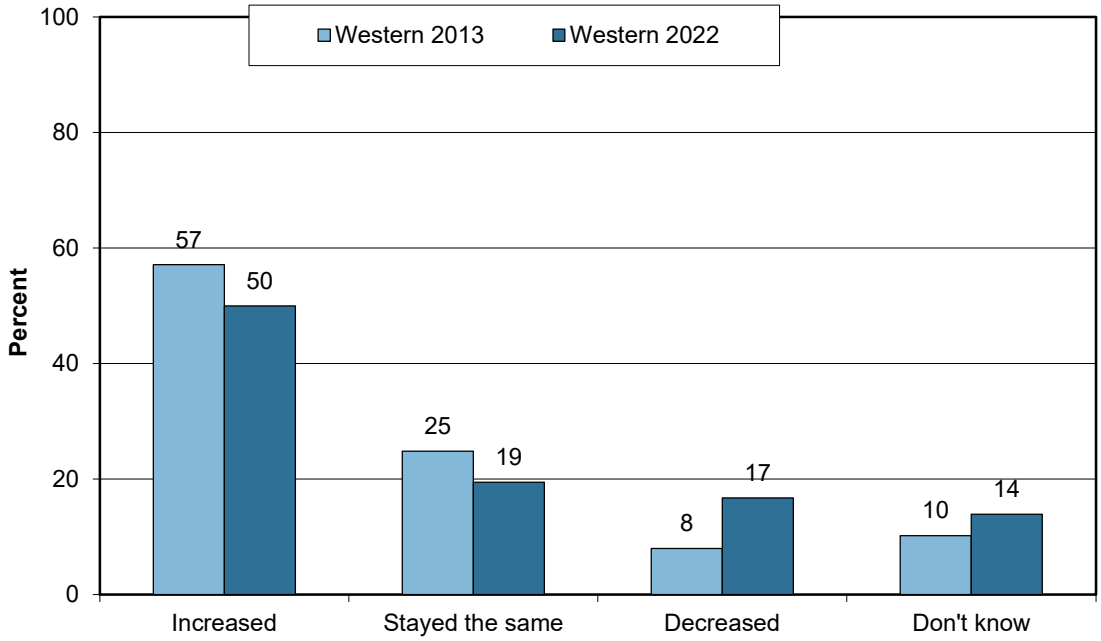

Overall, how much would you say you know about black bears in Maryland?
Western 2004
Western 2013
Western 2022
Percent
100
80
60
40
20
0
11
10
12
33
32
33
44
45
42
11
13
13
A great deal
A moderate amount
A little
Nothing

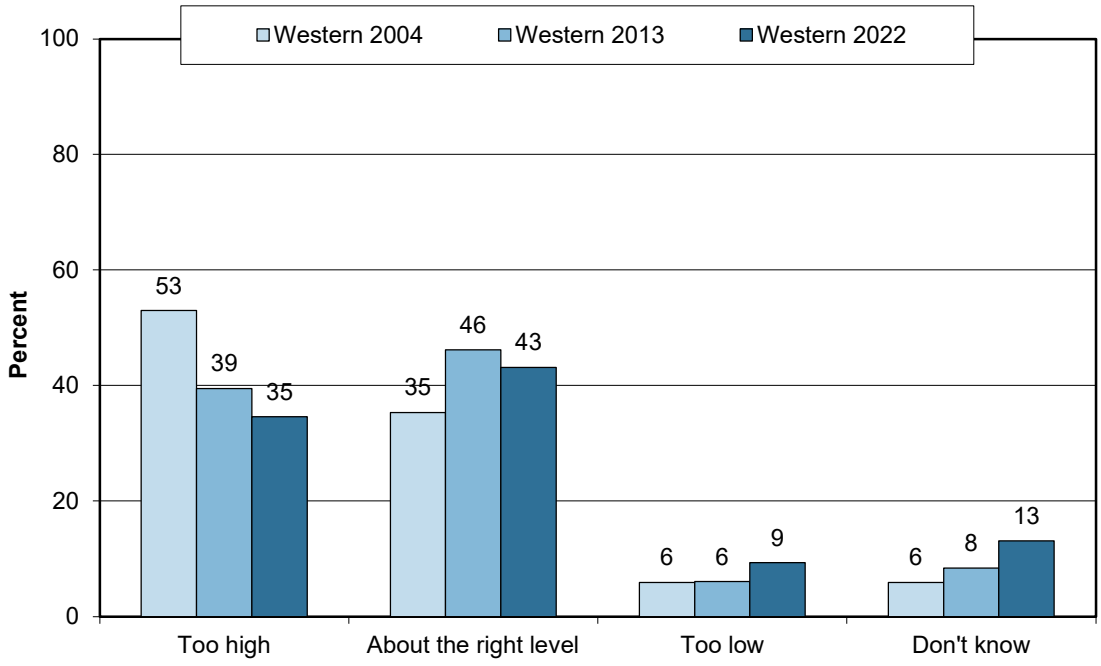

How common do you think black bears are in Maryland?
Western 2004
Western 2013
Western 2022
Percent
100
80
60
40
20
0
24
31
25
53
56
56
18
10
7
0
0
0
6
2
12
Abundant
Common
Rare
Extinct
Don't know

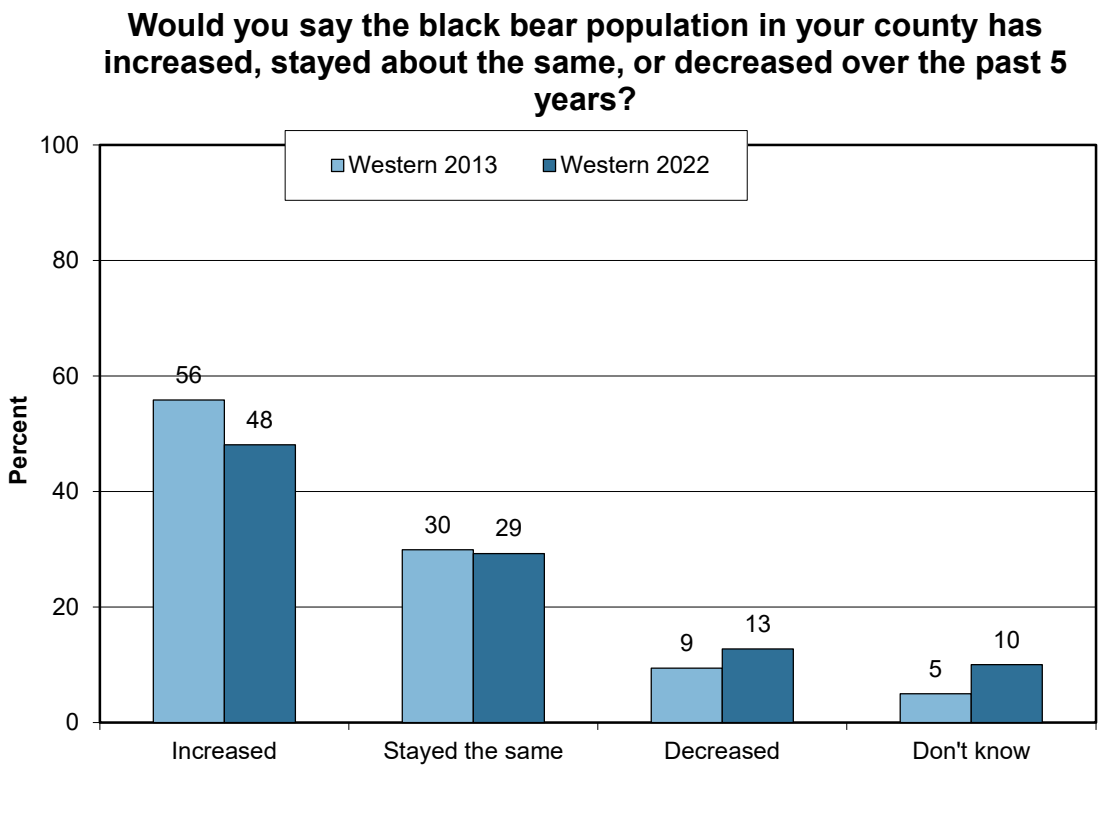
Overall, would you say the black bear population in Maryland is too high, too low, or about the right level?



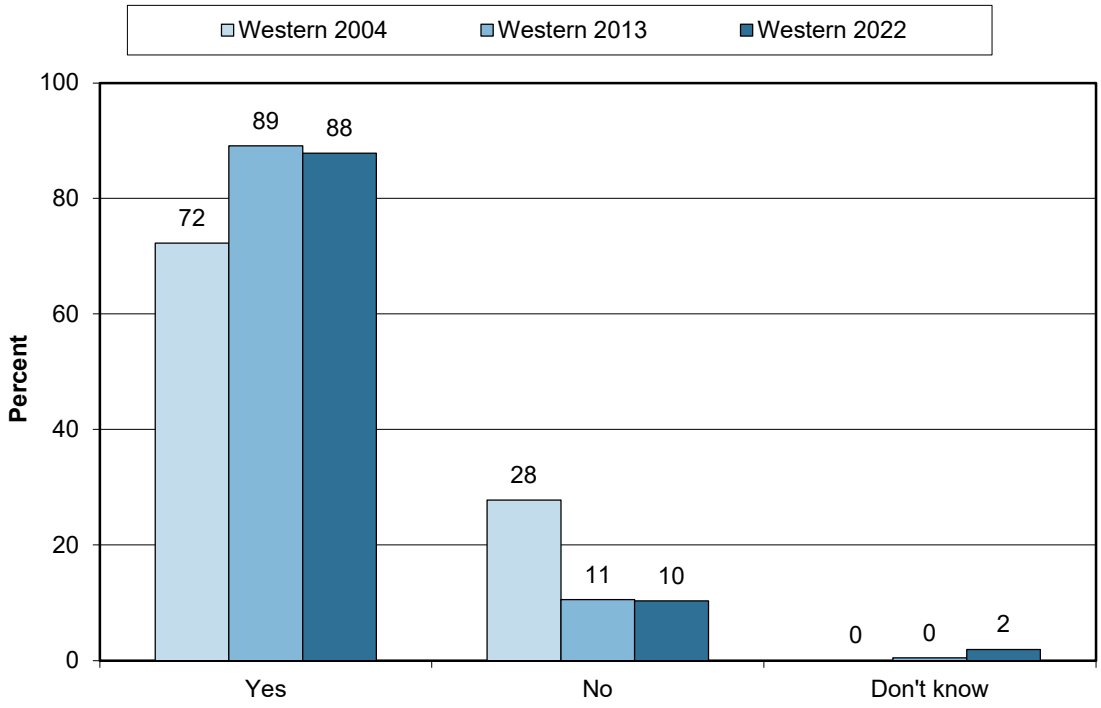
Would you say the black bear population in Maryland has increased, stayed about the same, or decreased over the past 5 years?



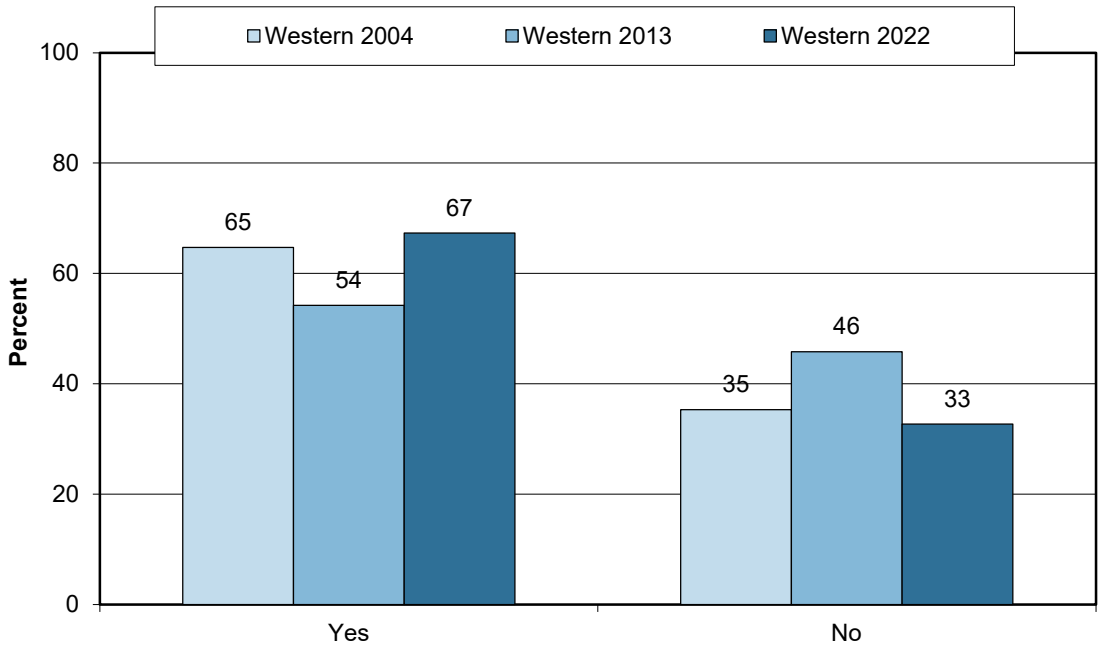

Overall, would you say the black bear population in your county is too high, too low, or about the right level?
Western 2004
Western 2013
Western 2022
Percent
100
80
60
40
20
0
53
39
35
35
46
43
6
6
9
6
8
13
Too high
About the right level
Too low
Don't know


Would you say the black bear population in your county has increased, stayed about the same, or decreased over the past 5 years?
Western 2013
Western 2022
Percent
100
80
60
40
20
0
56
48
30
29
9
13
5
10
Increased
Stayed the same
Decreased
Don't know

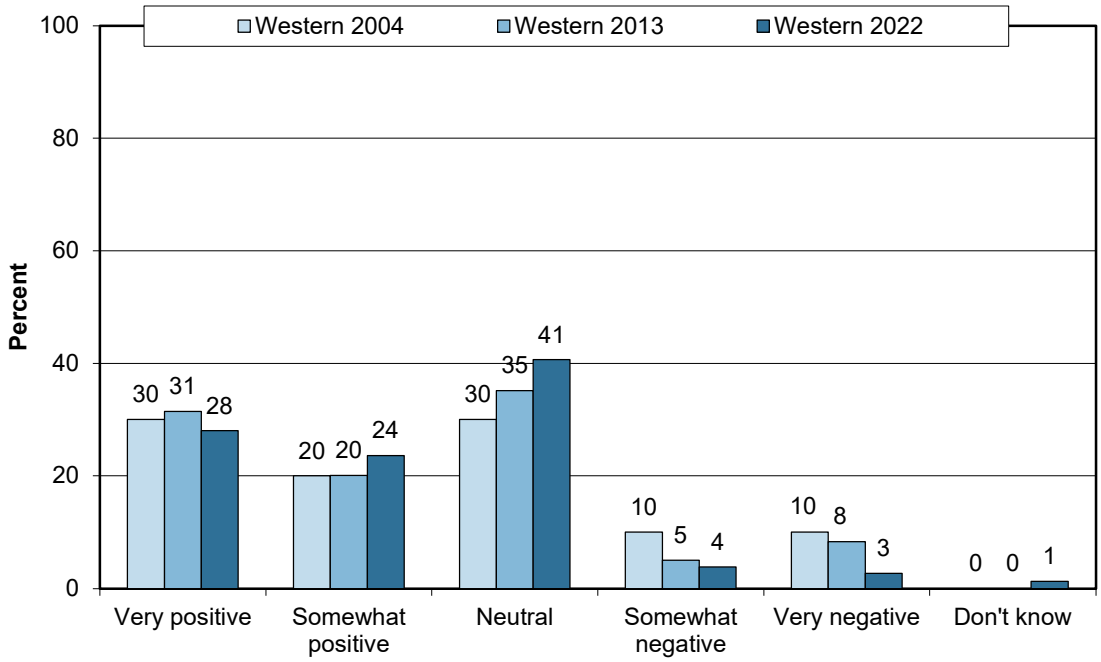
Have you ever seen evidence of a black bear in Maryland?



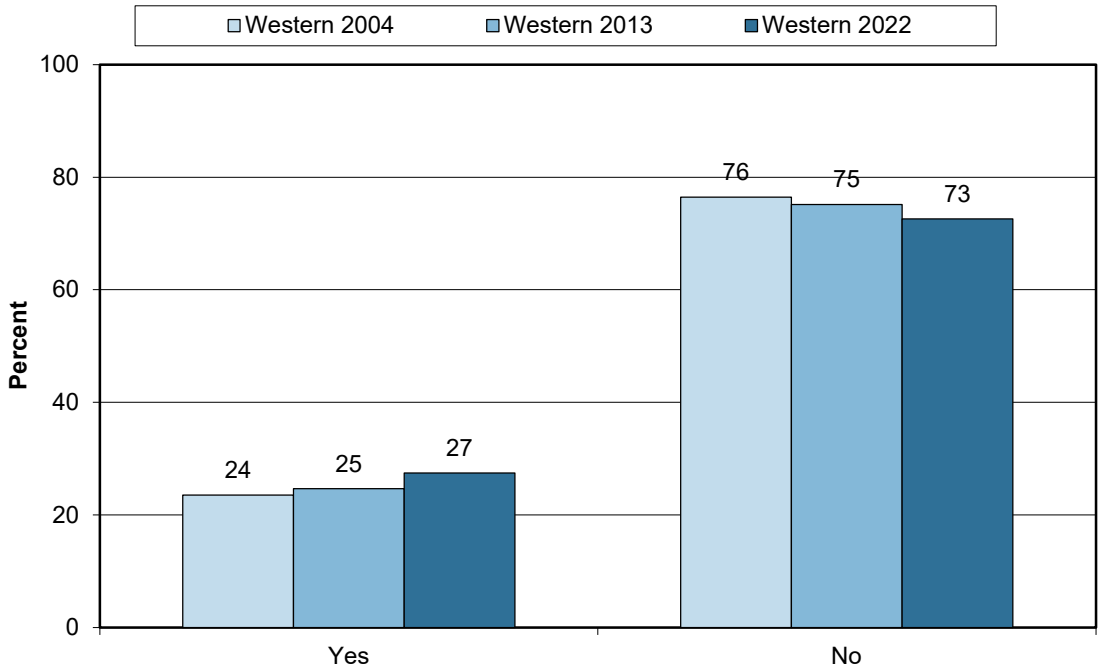
Have you ever encountered a black bear in the wild in Maryland?



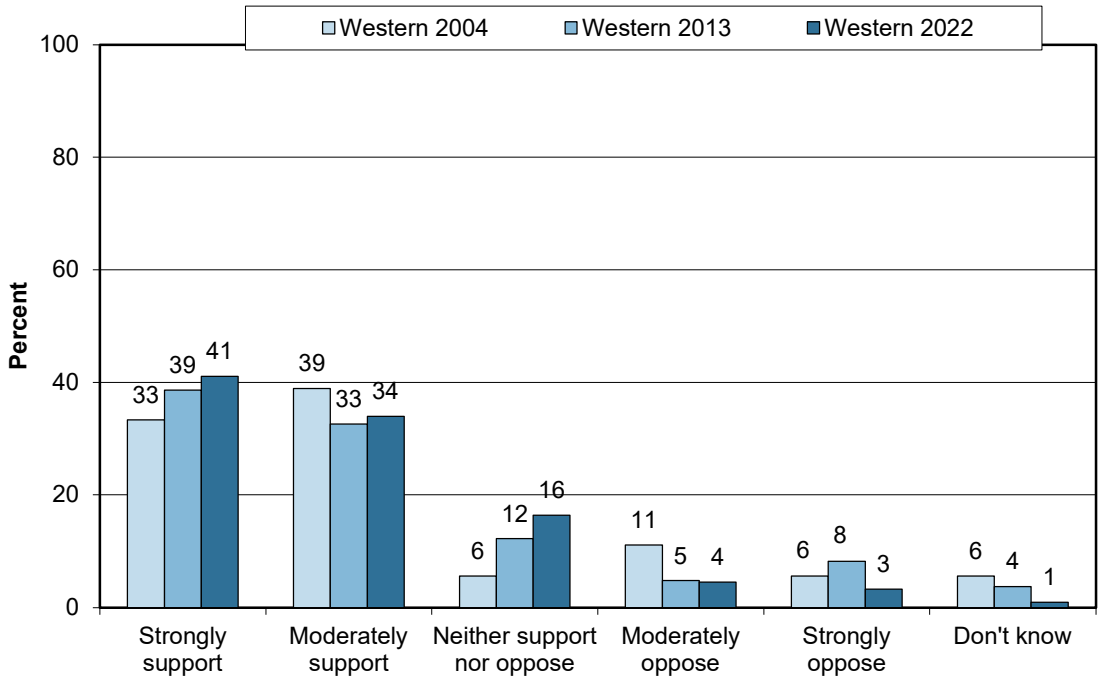
When you encountered a black bear in Maryland, would you describe the experience as positive, neutral, or negative? (Asked of those who encountered a black bear.)



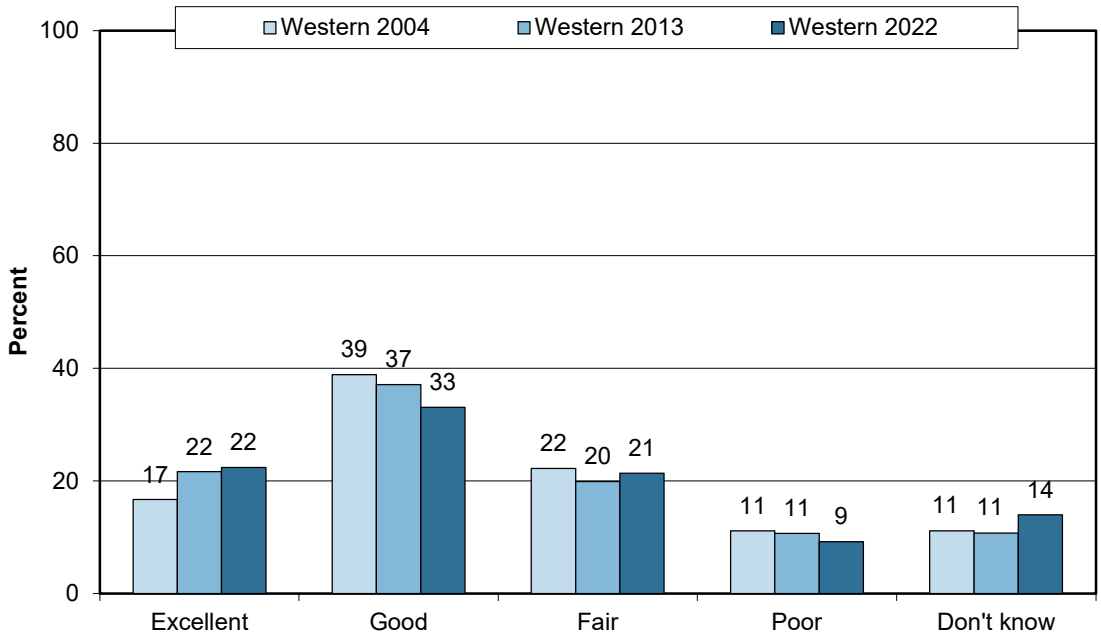
Have you had any problems with black bears within the past two years?



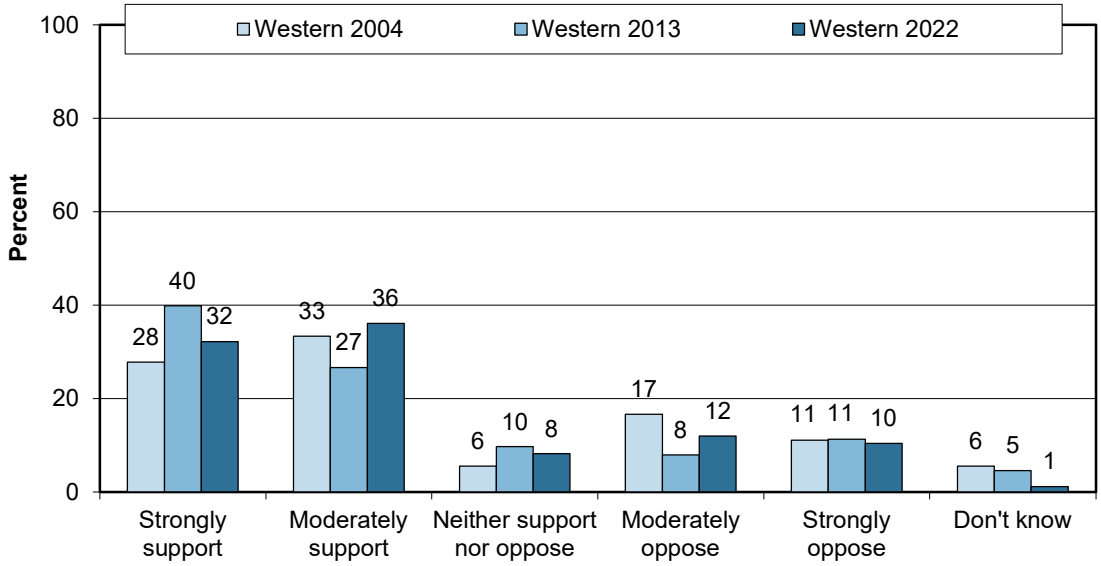
In general, do you support or oppose having black bears in Maryland?



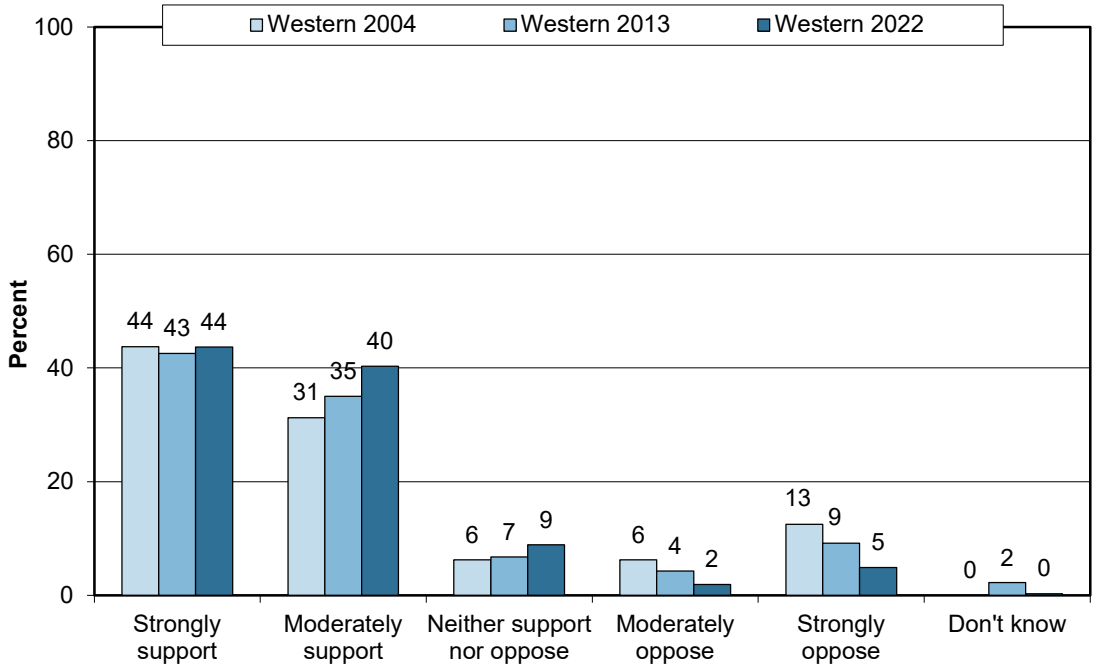
Overall, do you think the Maryland DNR has done an excellent, good, fair, or poor job of managing the black bears in Maryland?



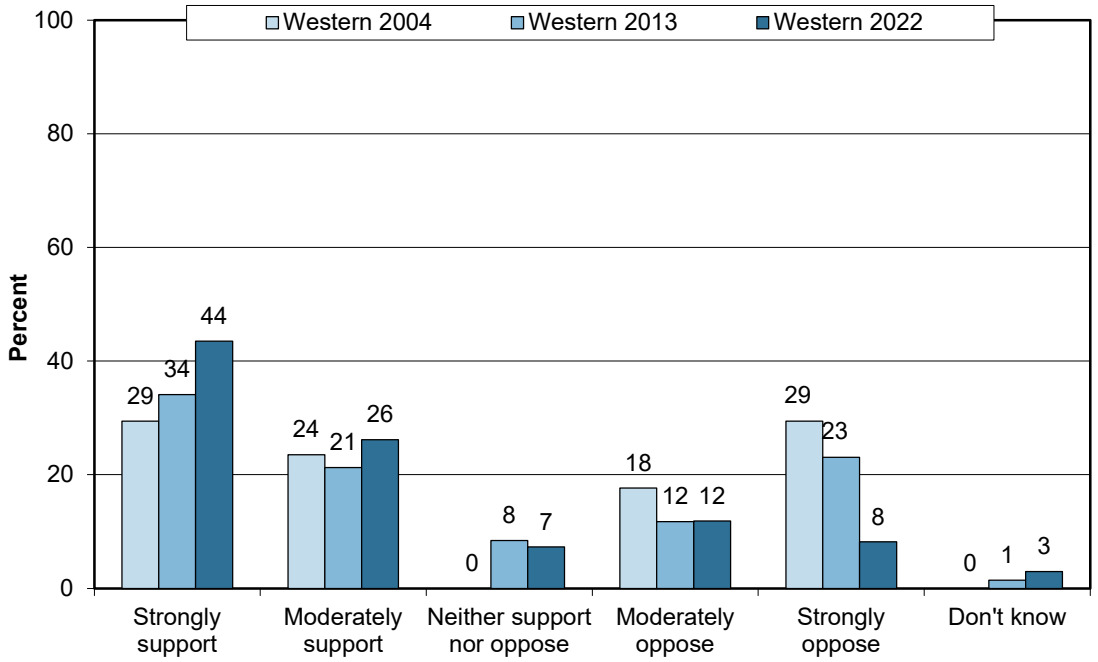
For your information, black bears are mostly found in the westernmost counties of Maryland: Garrett, Allegany, Washington, and Frederick. Do you support or oppose allowing the black bear population to expand naturally into other parts of Maryland?



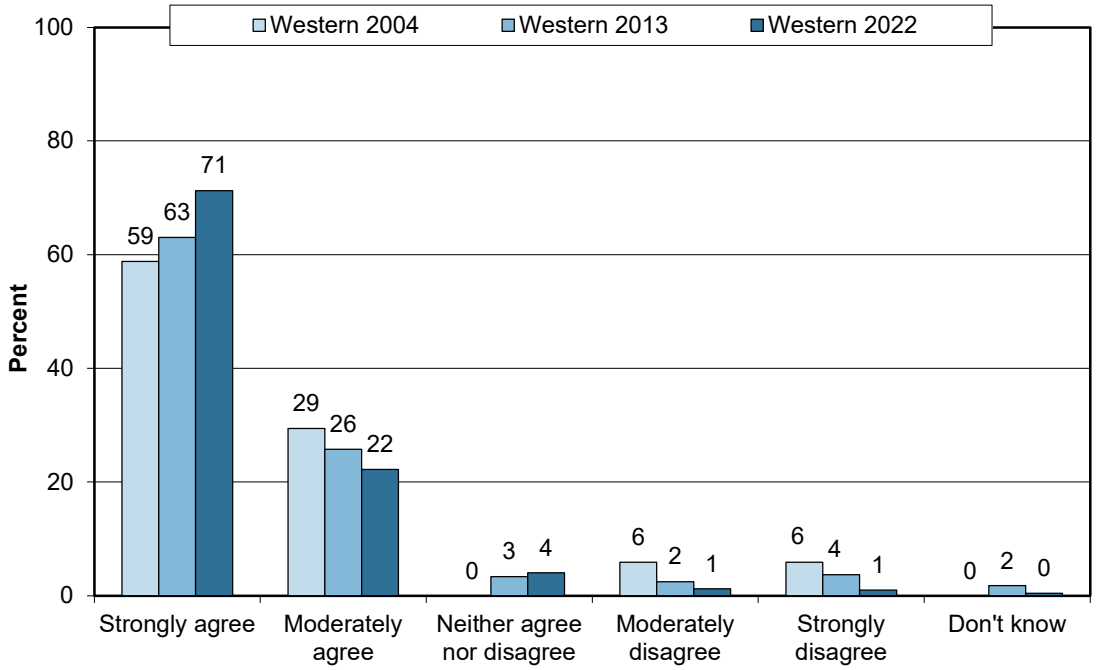
Would you support or oppose having black bears in your county?



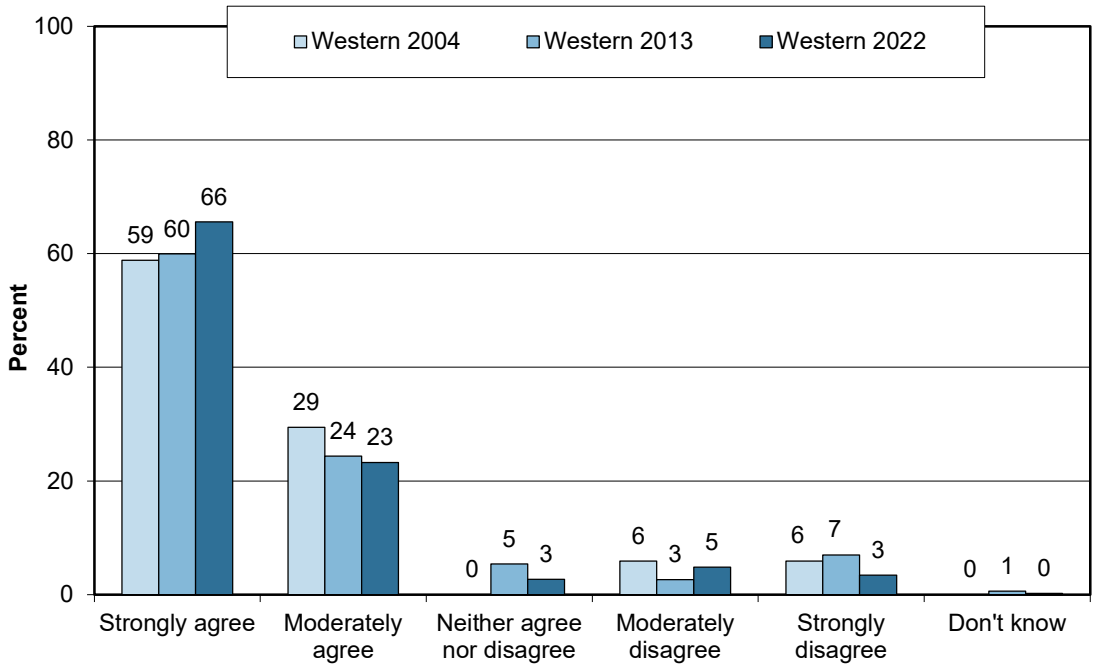
Would you support or oppose having black bears within 1/2 mile of your home?



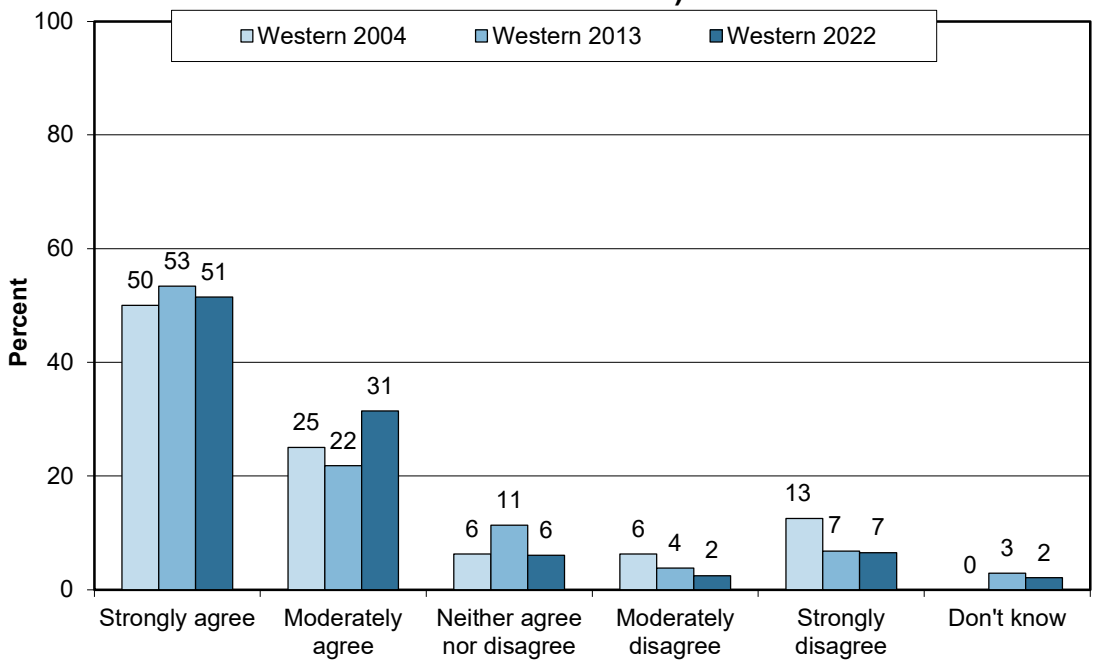
Preserving habitat on which black bears depend is important. (Do you agree or disagree with this statement?)



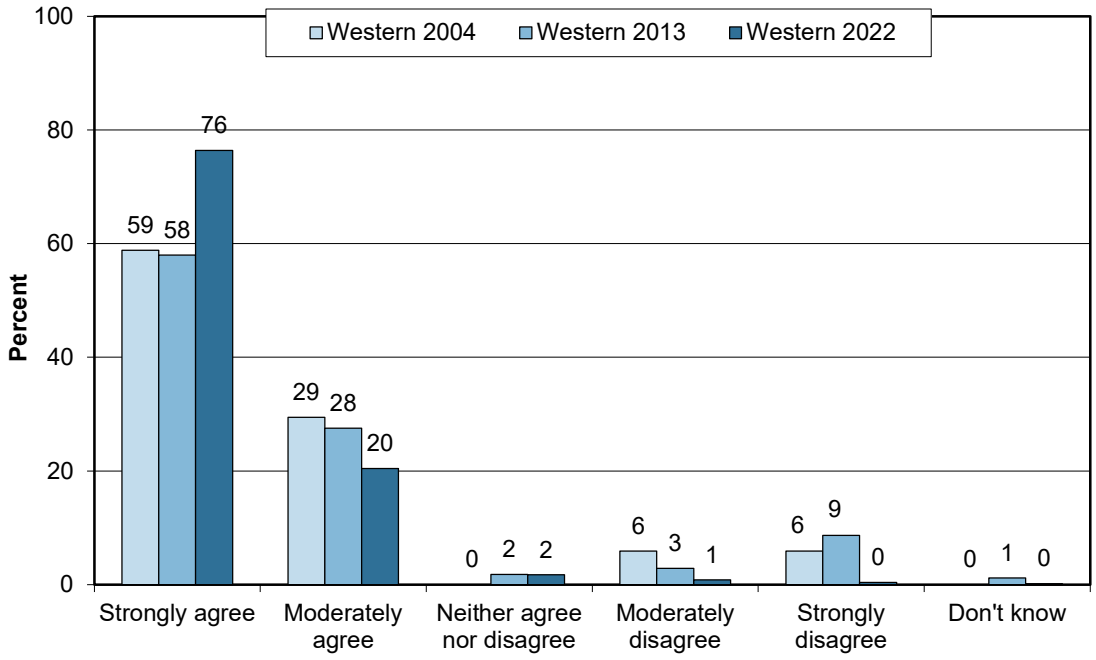
Black bears should be preserved in Maryland for future generations. (Do you agree or disagree with this statement?)



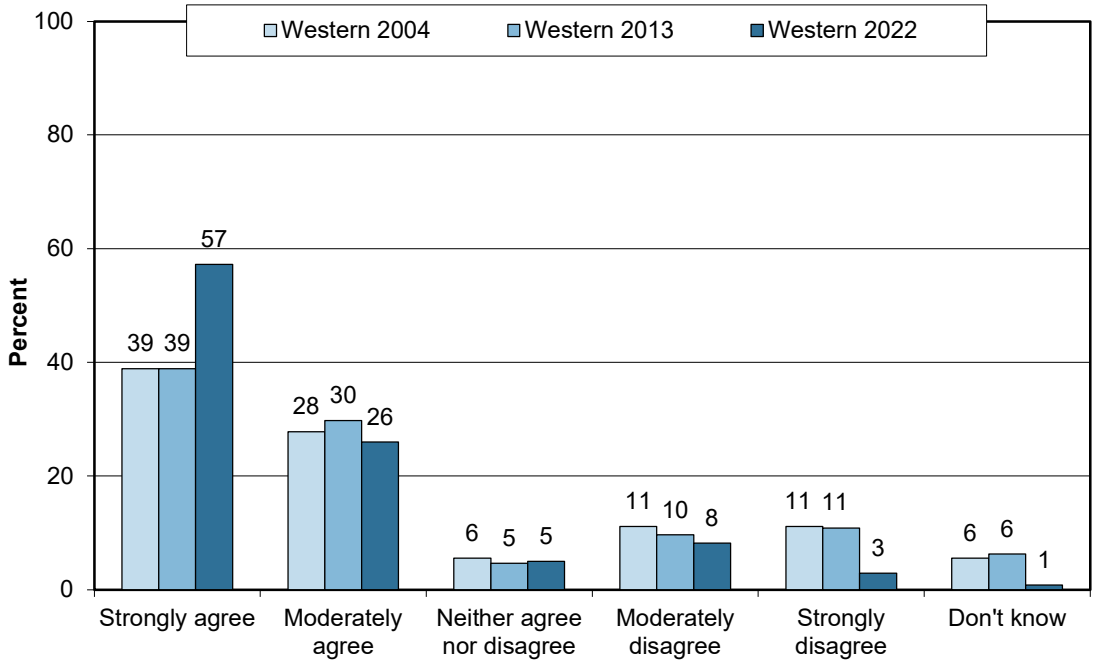
Although I may never see one, I derive satisfaction just knowing black bears exist in Maryland. (Do you agree or disagree with this statement?)

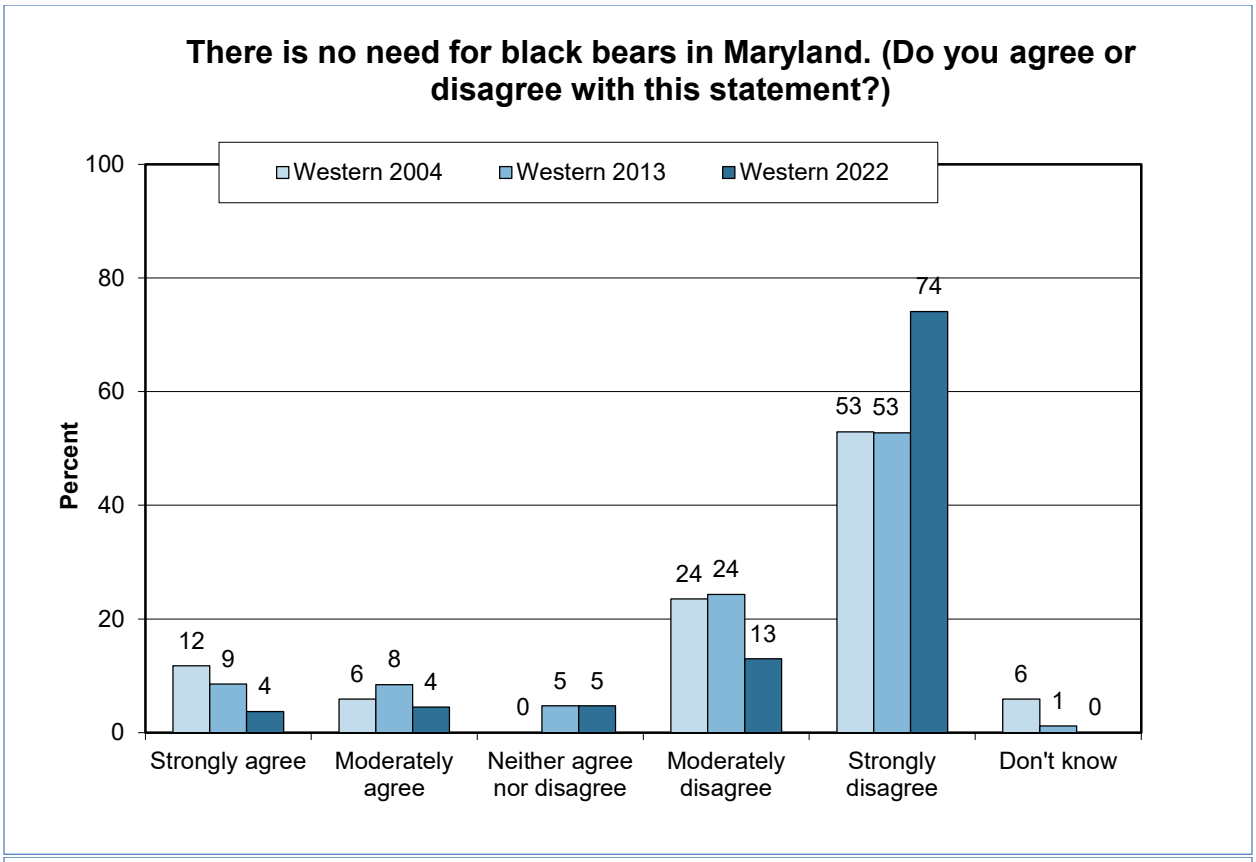


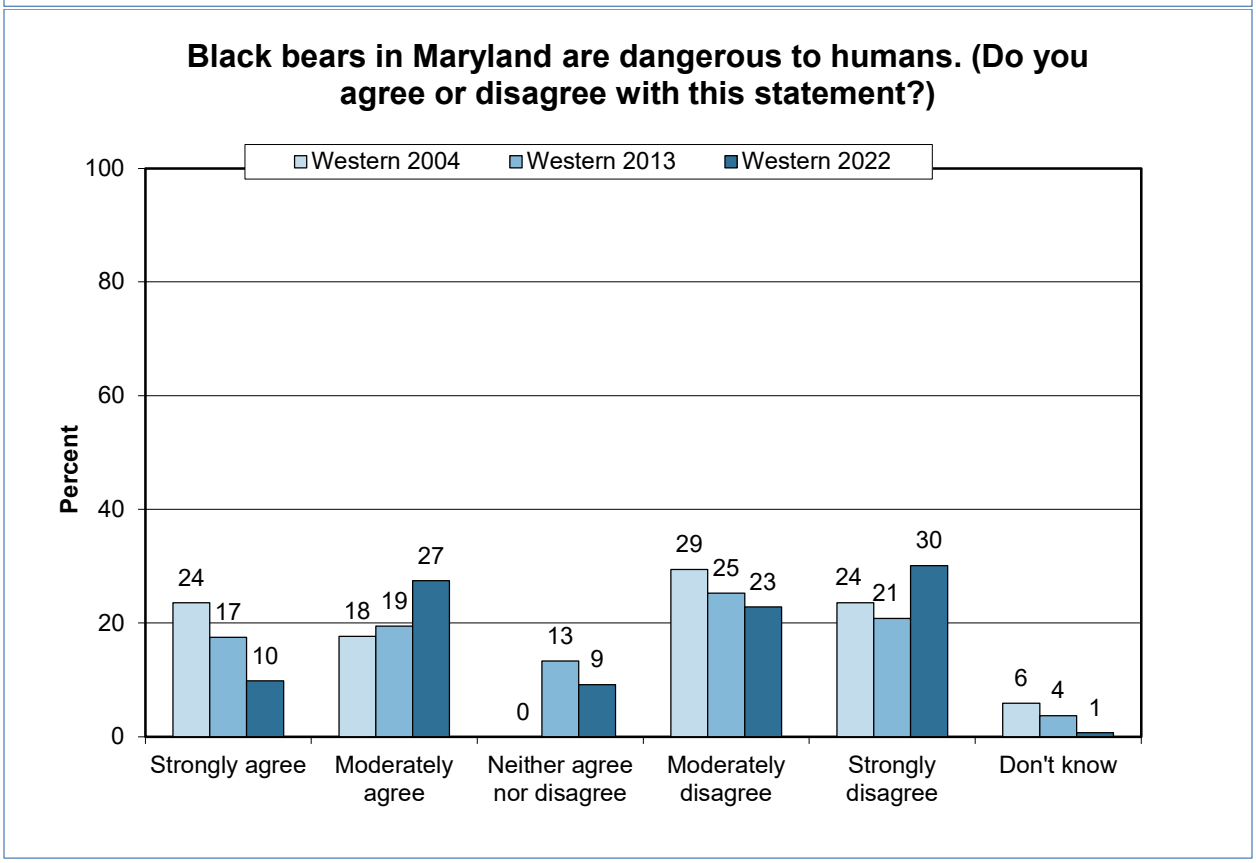
Black bears have an inherent right to live in Maryland. (Do you agree or disagree with this statement?)



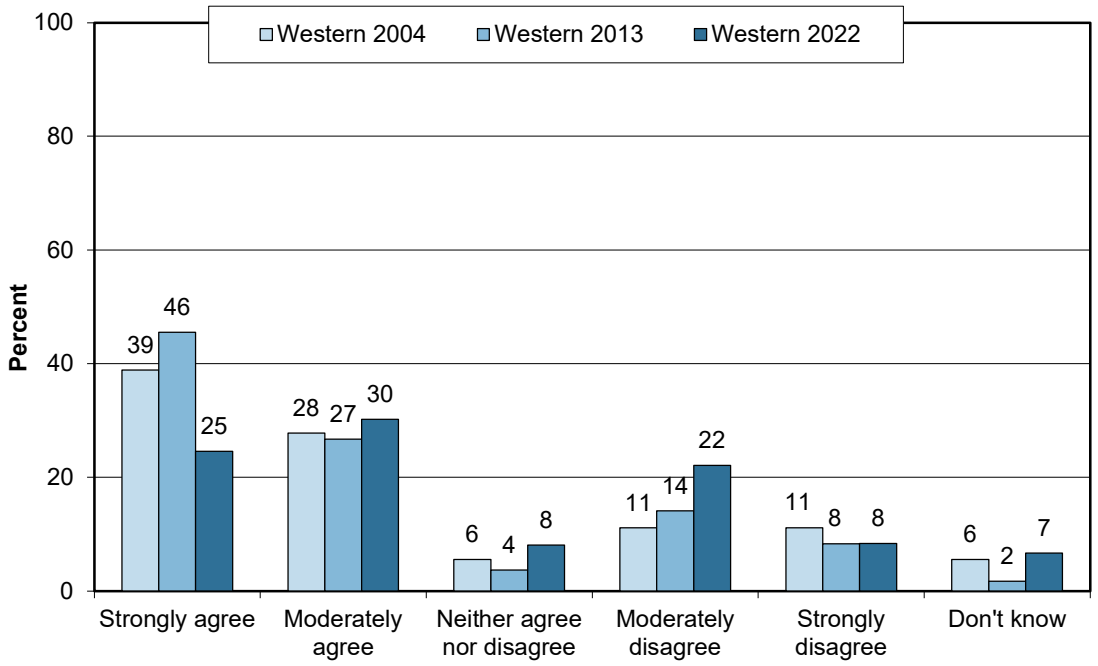
Black bears are an important and essential part of Maryland's ecosystem. (Do you agree or disagree with this statement?)



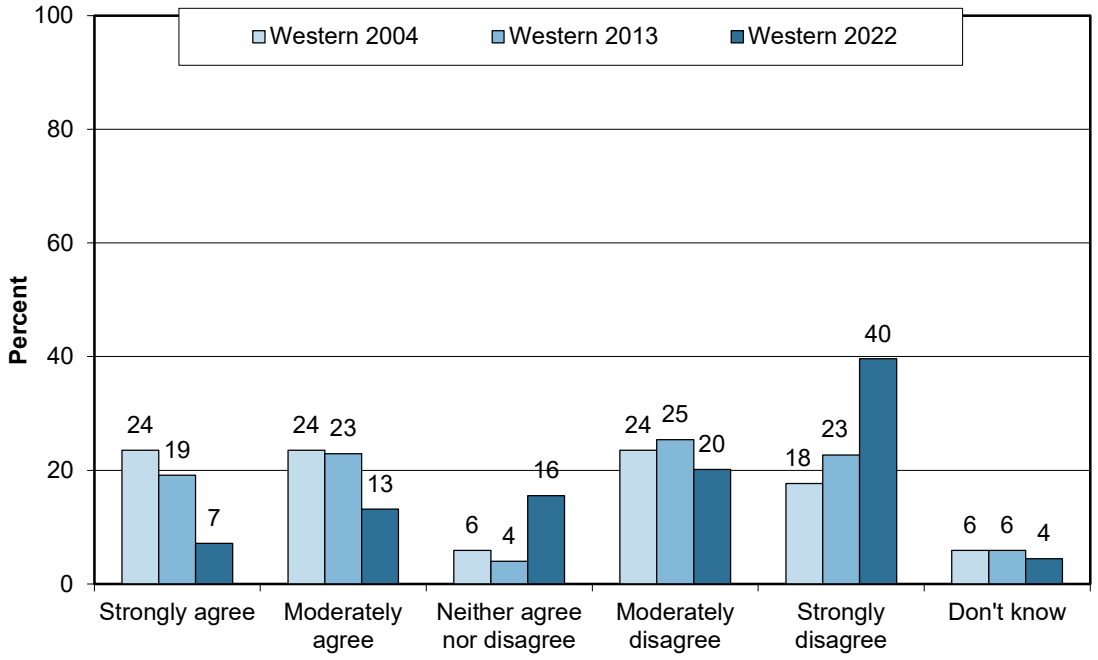

There is no need for black bears in Maryland. (Do you agree or disagree with this statement?)
Western 2004
Western 2013
Western 2022
Percent
100
80
60
40
20
0
12
9
4
6
8
4
0
5
5
24
24
13
53
53
74
6
1
0
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know


Black bears in Maryland are dangerous to humans. (Do you agree or disagree with this statement?)
Western 2004
Western 2013
Western 2022
Percent
100
80
60
40
20
0
24
17
10
18
19
27
0
13
9
29
25
23
24
21
30
6
4
1
Strongly agree
Moderately agree
Neither agree nor disagree
Moderately disagree
Strongly disagree
Don't know

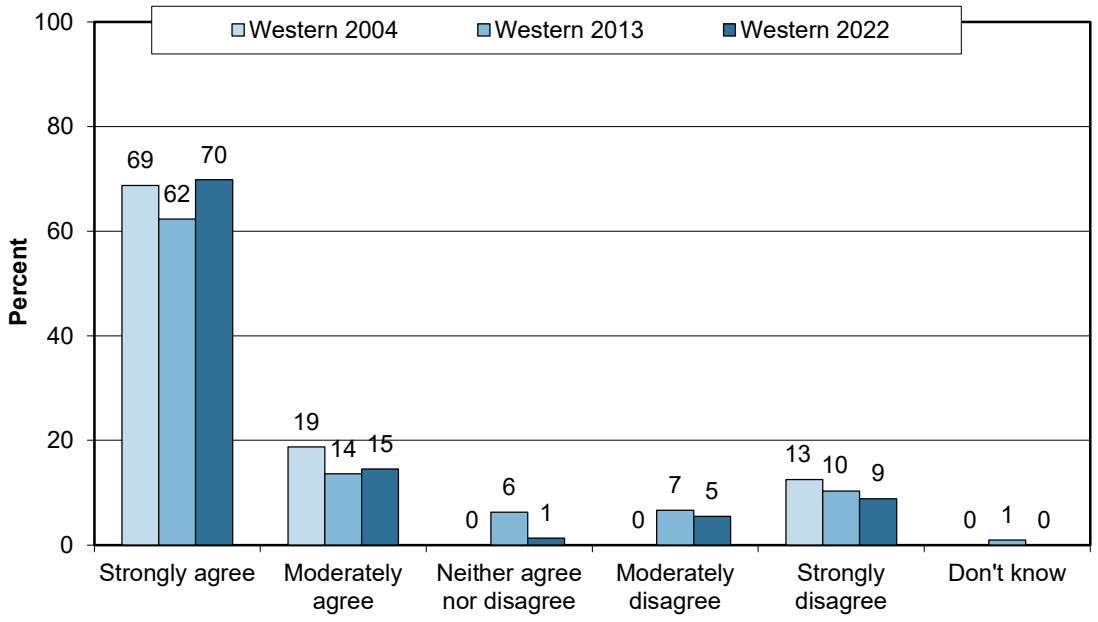
Black bears will frequently enter into populated areas in Maryland. (Do you agree or disagree with this statement?)



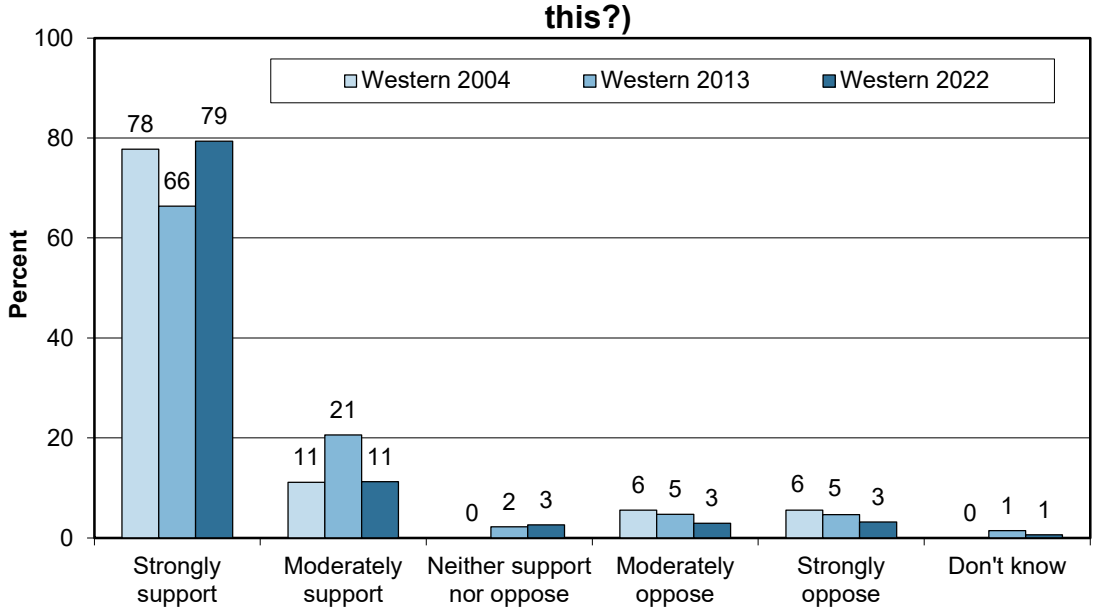
Black bears will kill many livestock and pets in Maryland. (Do you agree or disagree with this statement?)



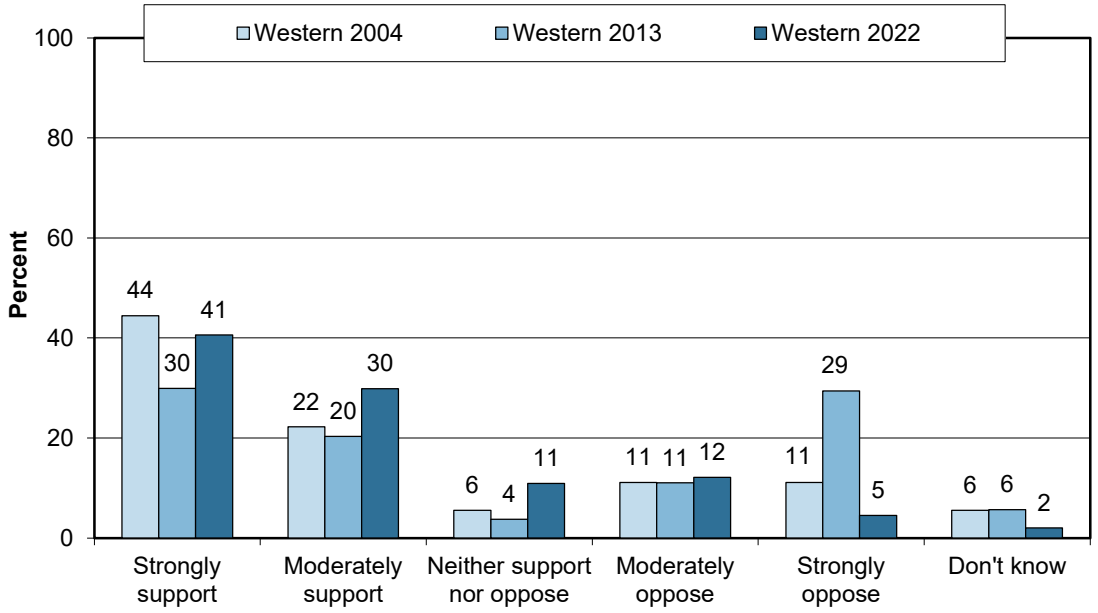
Most problems with black bears in Maryland can be prevented by taking a few simple precautions, such as using bear proof trash containers. (Do you agree or disagree with this statement?)



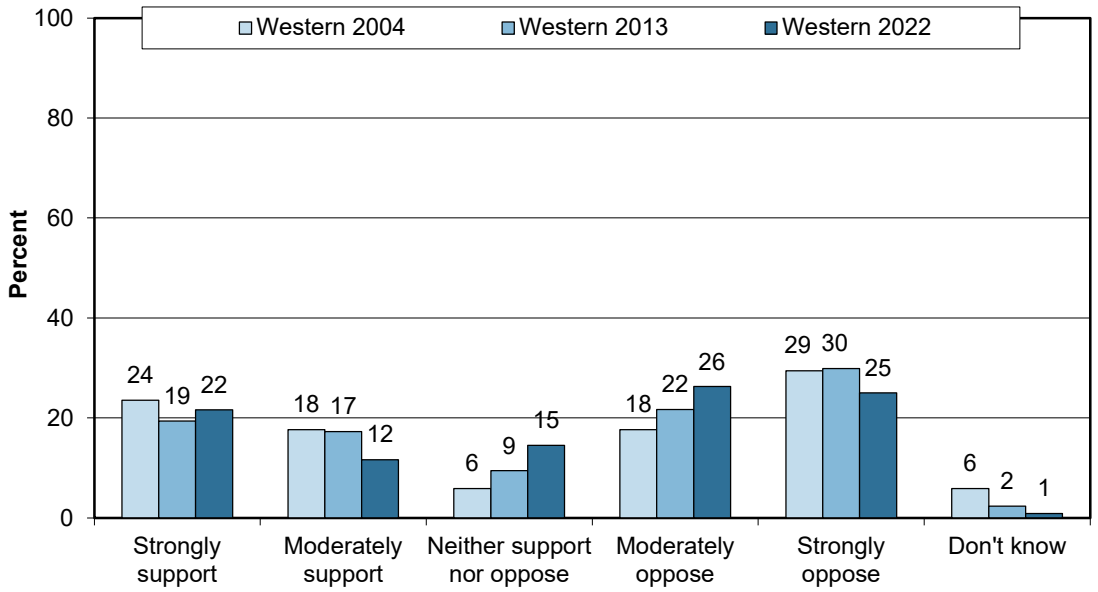
Requiring people visiting or living in black bear habitat to practice good sanitation practices and trash management, such as scheduling frequent trash pickup and regularly cleaning barbecue grills and picnic / camping areas. (Would you support or oppose this?)



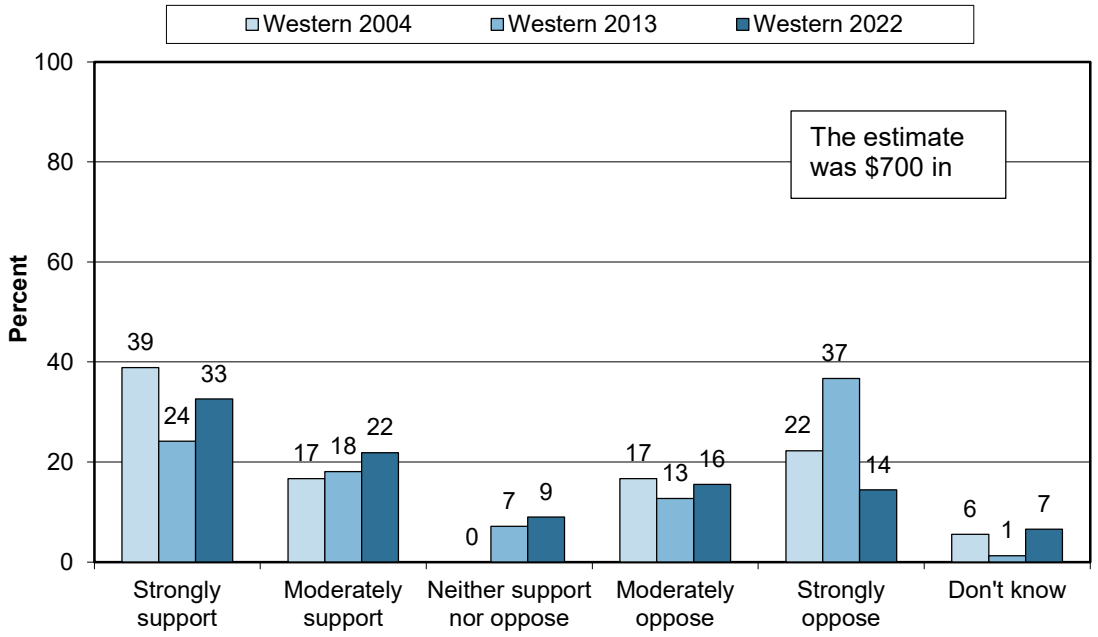
The use of electric fencing around small area bear attractants, such as beehives and aviaries. (Would you support or oppose this?)



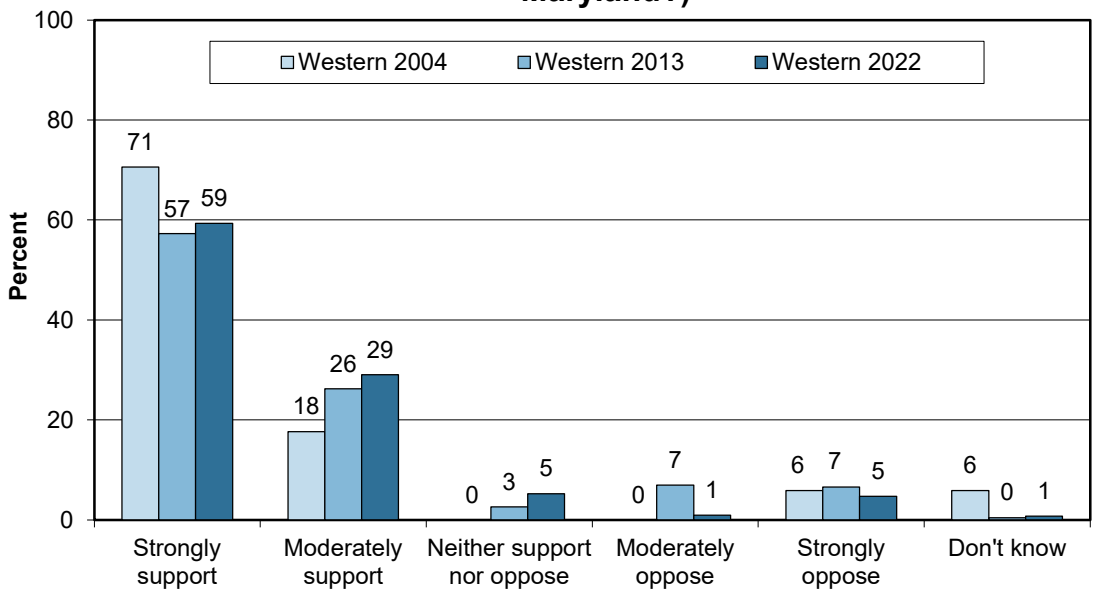
Prohibiting people visiting or living in black bear habitat from using birdfeeders or participating in other wildlife feeding activities. (Would you support or oppose this?)



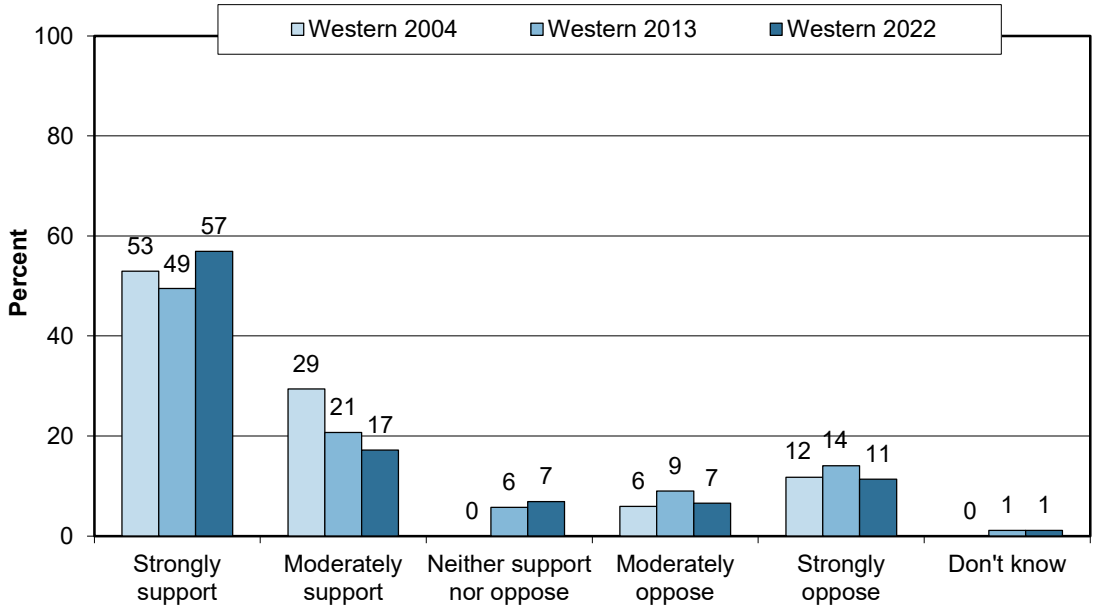
Requiring people visiting or living in black bear habitat to use bear-proof trash and food containers, which can cost $1,000 or more. (Would you support or oppose this?)



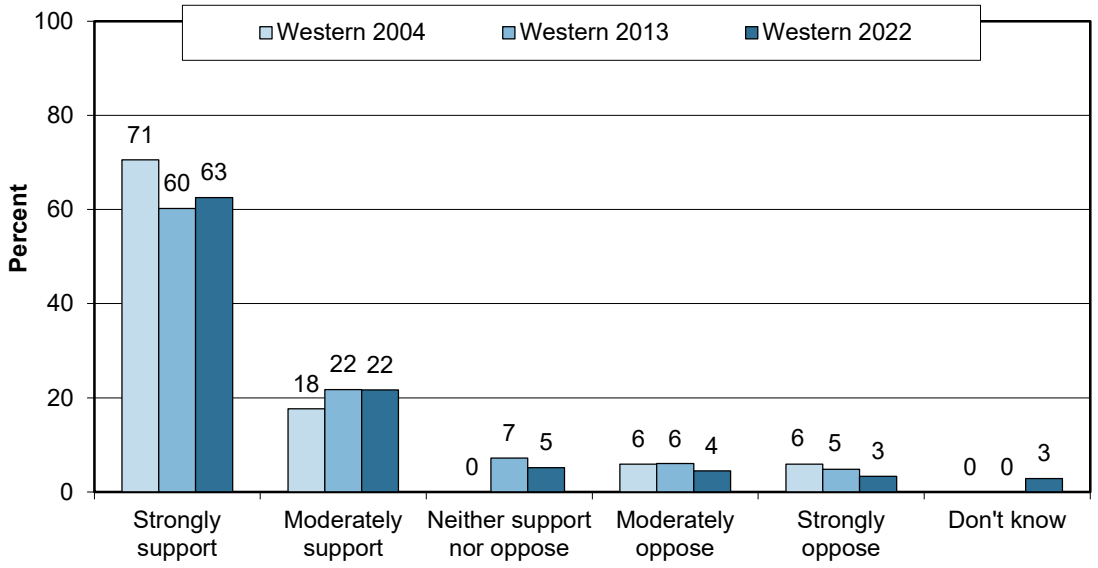
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



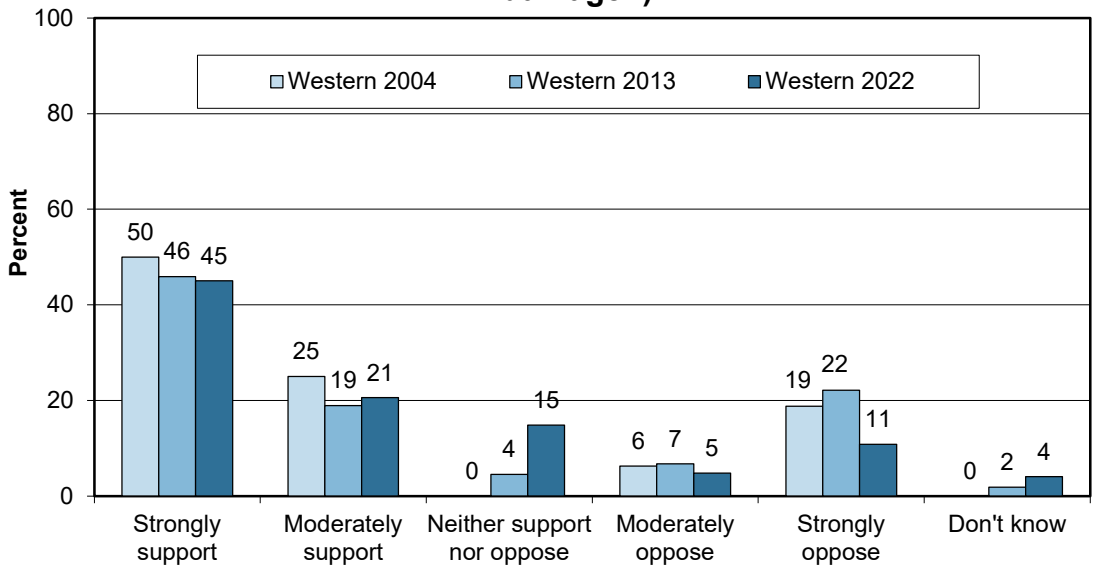
The DNR issuing depredation (kill) permits for black bears. (Do you support or oppose this to resolve situations with bears that cause damage to livestock or pets in Maryland?)



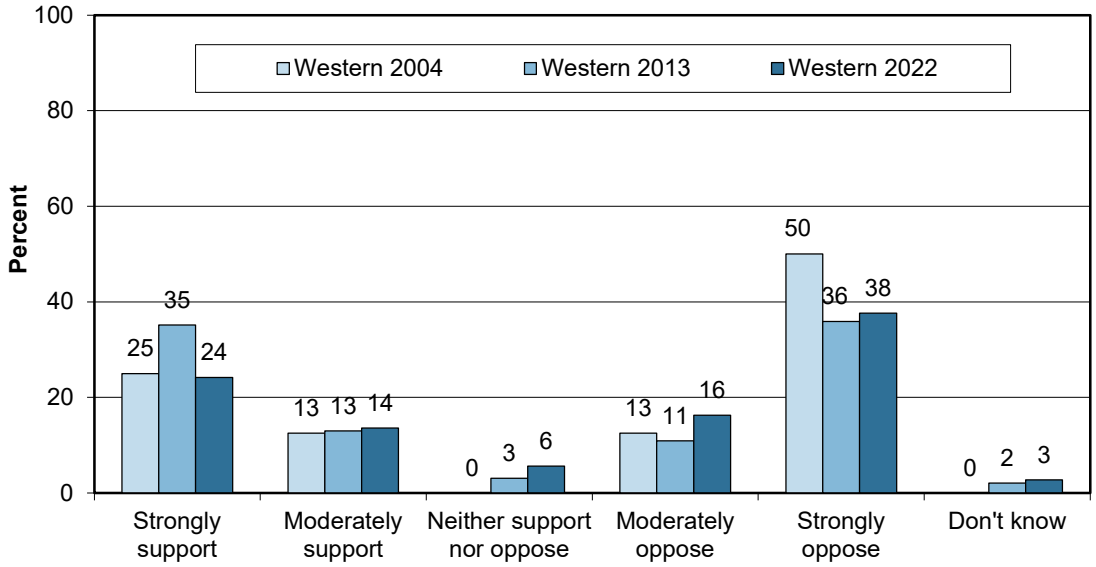
The DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition. (Do you support or oppose this to resolve situations with bears that cause damage to personal property or crops in Maryland?)



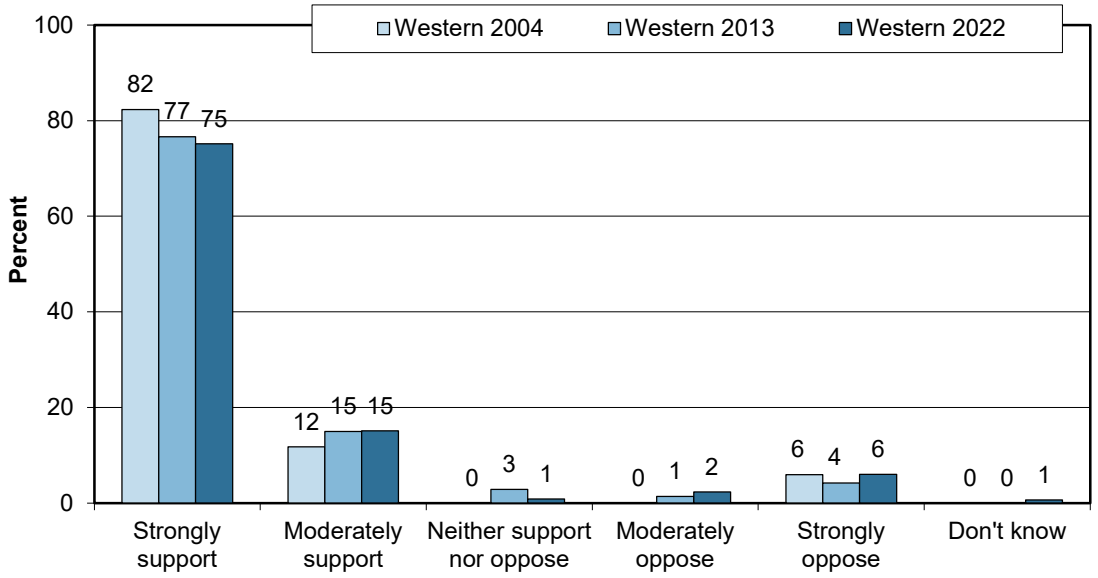
The DNR issuing depredation (kill) permits for black bears that cause damage to personal property or destruction of crops, resulting in a monetary loss for farmers in Maryland. (Do you support or oppose this to resolve situations with bears that cause damage?)



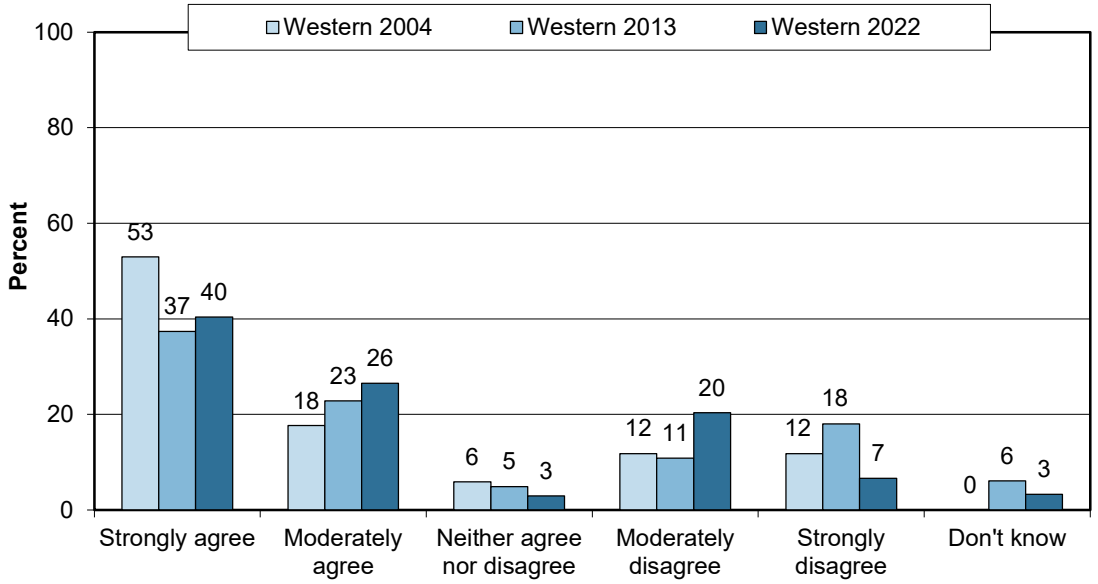
Allowing private citizens to kill bears that are causing damage to personal property or destruction of crops resulting in a monetary loss for farmers without first obtaining a depredation (kill) permit from the DNR. (Do you support or oppose this to resolve situations with bears that cause damage?)



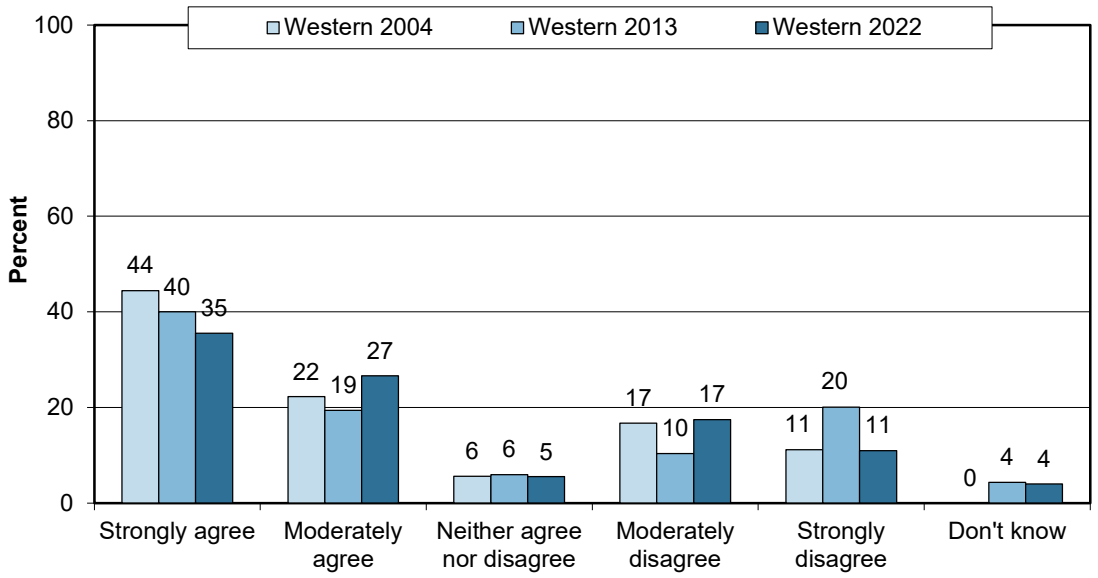
Do you support or oppose the DNR using repellents such as bear pepper spray, loud noises, trained bear-chasing hounds, or non-lethal shotgun ammunition for black bears that threaten human safety in Maryland?



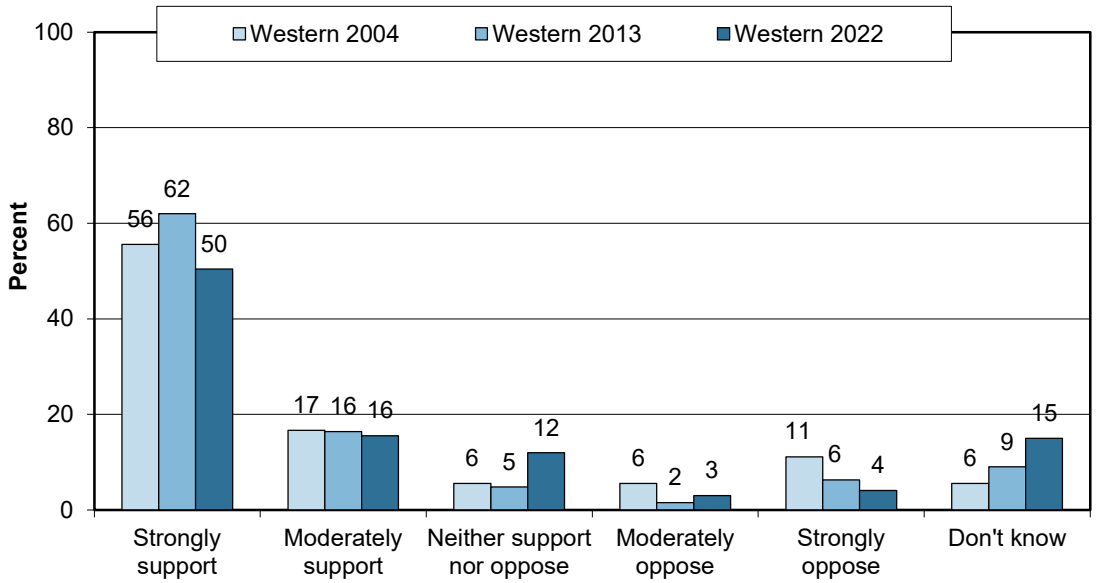
When black bear damage occurs to livestock in Maryland, do you agree or disagree that the property owner should be compensated for the damages?

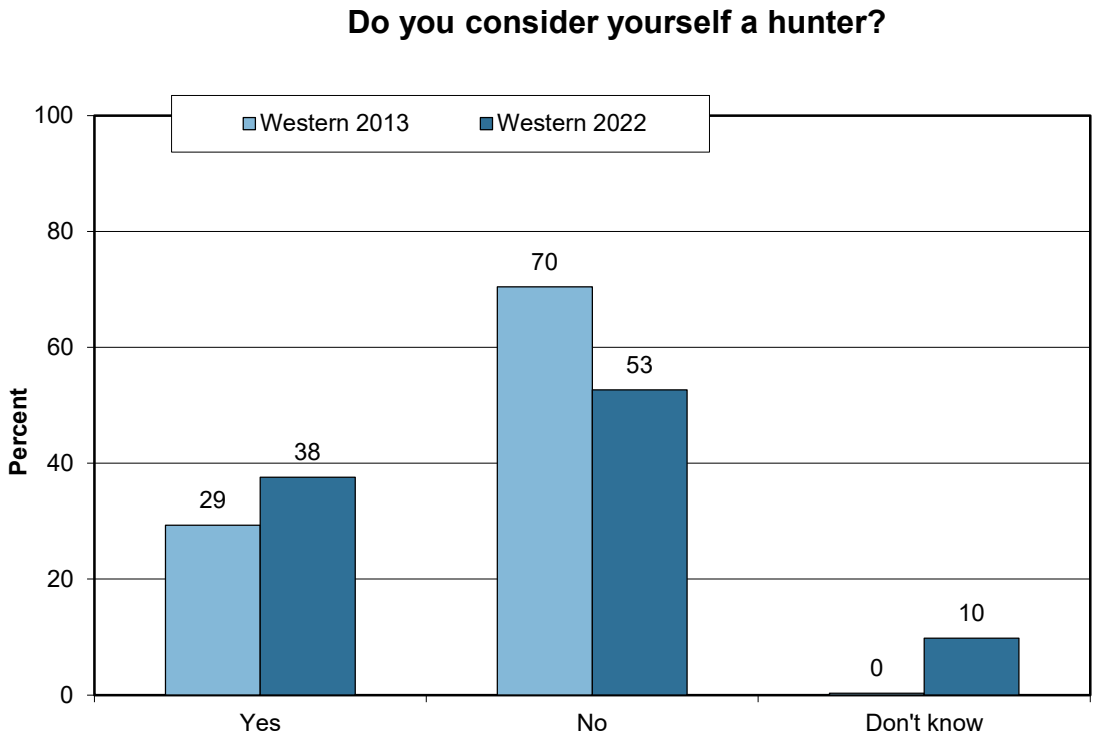


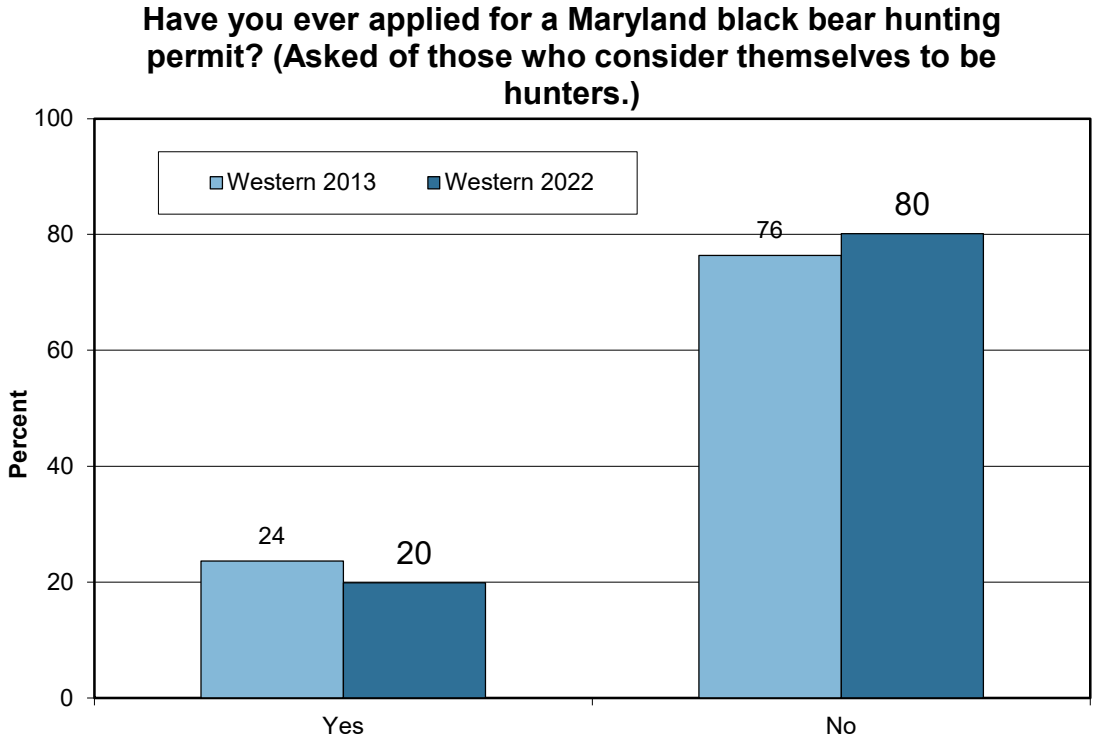
When black bear damage occurs to crops in Maryland, do you agree or disagree that the property owner should be compensated for the damages?



Would you support or oppose black bear hunting in Maryland if you knew that almost all of the funds used to manage Maryland's black bear population over the past twenty years has come from hunter-derived revenue sources?




Do you consider yourself a hunter?
Western 2013
Western 2022
Percent
100
80
60
40
20
0
29
38
70
53
0
10
Yes
No
Don't know


Have you ever applied for a Maryland black bear hunting permit? (Asked of those who consider themselves to be hunters.)
Western 2013
Western 2022
Percent
100
80
60
40
20
0
24
20
76
80
Yes
No

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is an internationally recognized survey research firm specializing in natural resource and outdoor recreation issues. Our mission is to help natural resource and outdoor recreation agencies, businesses, and organizations better understand and work with their constituents, customers, and the public. Focusing only on natural resource and outdoor recreation issues, Responsive Management has conducted telephone, mail, and online surveys, as well as multi-modal surveys, on-site intercepts, focus groups, public meetings, personal interviews, needs assessments, program evaluations, marketing and communication plans, and other forms of human dimensions research measuring how people relate to the natural world for more than 30 years. Utilizing our in-house, full-service survey facilities with 75 professional interviewers, we have conducted studies in all 50 states and 15 countries worldwide, totaling more than 1,000 human dimensions projects *only* on natural resource and outdoor recreation issues.

Responsive Management has conducted research for every state fish and wildlife agency and every federal natural resource agency, including the U.S. Fish and Wildlife Service, the National Park Service, the U.S. Forest Service, Bureau of Land Management, U.S. Coast Guard, and the National Marine Fisheries Service. Additionally, we have also provided research for all the major conservation NGOs including the Archery Trade Association, the American Sportfishing Association, the Association of Fish and Wildlife Agencies, Dallas Safari Club, Ducks Unlimited, Environmental Defense Fund, the Izaak Walton League of America, the National Rifle Association, the National Shooting Sports Foundation, the National Wildlife Federation, the Recreational Boating and Fishing Foundation, the Rocky Mountain Elk Foundation, Safari Club International, the Sierra Club, Trout Unlimited, and the Wildlife Management Institute.

Other nonprofit and NGO clients include the American Museum of Natural History, the BoatUS Foundation, the National Association of Conservation Law Enforcement Chiefs, the National Association of State Boating Law Administrators, and the Ocean Conservancy. As well, Responsive Management conducts market research and product testing for numerous outdoor recreation manufacturers and industry leaders, such as Winchester Ammunition, Vista Outdoor (whose brands include Federal Premium, CamelBak, Bushnell, Primos, and more), Trijicon, Yamaha, and others. Responsive Management also provides data collection for the nation's top universities, including Auburn University, Clemson University, Colorado State University, Duke University, George Mason University, Michigan State University, Mississippi State University, North Carolina State University, Oregon State University, Penn State University, Rutgers University, Stanford University, Texas Tech, University of California-Davis, University of Florida, University of Montana, University of New Hampshire, University of Southern California, Virginia Tech, West Virginia University, Yale University, and many more.

Our research has been upheld in U.S. Courts, used in peer-reviewed journals, and presented at major wildlife and natural resource conferences around the world. Responsive Management's research has also been featured in many of the nation's top media, including *Newsweek*, *The Wall Street Journal*, *The New York Times*, CNN, National Public Radio, and on the front pages of *The Washington Post* and *USA Today*.