

Participation Levels in and Economic Contributions from Outdoor Recreation in Ohio



**Study Conducted for the
Ohio Division of Wildlife**

**by
Wildlife Management Institute,
Responsive Management,
and Southwick Associates**

2023



PARTICIPATION LEVELS IN AND ECONOMIC CONTRIBUTIONS FROM OUTDOOR RECREATION IN OHIO

2023

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EXECUTIVE SUMMARY

To better serve the public, the Ohio Department of Natural Resources, Division of Wildlife (the Division), seeks to understand the number of participants, their levels of activity, and the economic contributions associated with the outdoor recreation activities and natural resources under its authority.

This project is a collaborative effort between the Wildlife Management Institute, Responsive Management, and Southwick Associates on behalf of the Division. It entailed a probability-based survey of the general population of Ohio, surveys of four activity groups in the state (hunters, anglers, target/sport shooters, and wildlife viewers), and economic analyses of these activities in the state.

SUMMARY OF METHODOLOGY

Specifically, the study entailed five separate multi-modal surveys of Ohio residents and Ohio resident recreationists ages 18 or older.

1. General population survey of Ohio residents, ages 18 and older, conducted via online and telephone to determine outdoor activity participation rates.
2. Ohio resident licensed hunter survey, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to hunting in Ohio.
3. Ohio resident licensed angler survey, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to fishing in Ohio.
4. Ohio resident sport shooters, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to sport shooting activities, including archery, in Ohio.
5. Ohio resident wildlife viewers, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to wildlife viewing activities in Ohio.

Responsive Management obtained the following total completed questionnaires for each survey:

Survey	Number of Completed Questionnaires
Ohio General Population	2,306
Ohio Licensed Hunters	1,047
Ohio Licensed Anglers	673
Ohio Sport Shooters	533
Ohio Wildlife Viewers	424

Each of the five survey questionnaires were developed cooperatively by Responsive Management, Southwick Associates, the Wildlife Management Institute, and the Division. All five questionnaires were administered via telephone and online. There are slight differences in wording between the telephone and online versions of the surveys to accommodate each survey mode, but otherwise the telephone and online versions of each survey were identical.

The telephone questionnaires were coded for integration with Responsive Management's computer-assisted telephone interviewing system and were administered by Responsive Management interviewers with extensive experience conducting surveys about hunting, fishing, shooting, and outdoor recreation in general.

The samples of Ohio general population residents (telephone, text, and online) were obtained from Marketing Systems Group (MSG), a firm that specializes in providing scientifically valid samples for survey research. The samples of Ohio resident licensed hunters and anglers were obtained from hunting and fishing license data provided by the Division. The samples of Ohio resident sport shooters were obtained from several sources: public shooting range permit holders, Ohio residents in general who were identified through screeners as sport shooters, and sport shooters from lists maintained by MSG. The sample of Ohio resident wildlife viewers were obtained by identifying wildlife viewers among Ohio general population residents.

All surveys for this project consisted of both a telephone survey effort and a closed online survey effort. In this context, "closed" means that a person surfing the internet could not access the survey. For both the telephone and online portions of the surveys, only those specifically invited and contacted could complete the survey.

For the telephone phase of the surveys, telephone interviews were conducted Monday through Friday from noon to 9:00 p.m., and Saturday from noon to 7:00 p.m. local time, using interviewers with experience conducting computer-assisted surveys about hunting, fishing, sport shooting, wildlife viewing, and outdoor recreation in general.

The telephone phase of the general population survey of Ohio residents to measure participation was conducted in November and December 2022. The telephone portions of the hunter, angler, sport shooter, and wildlife viewer surveys were conducted in January 2023.

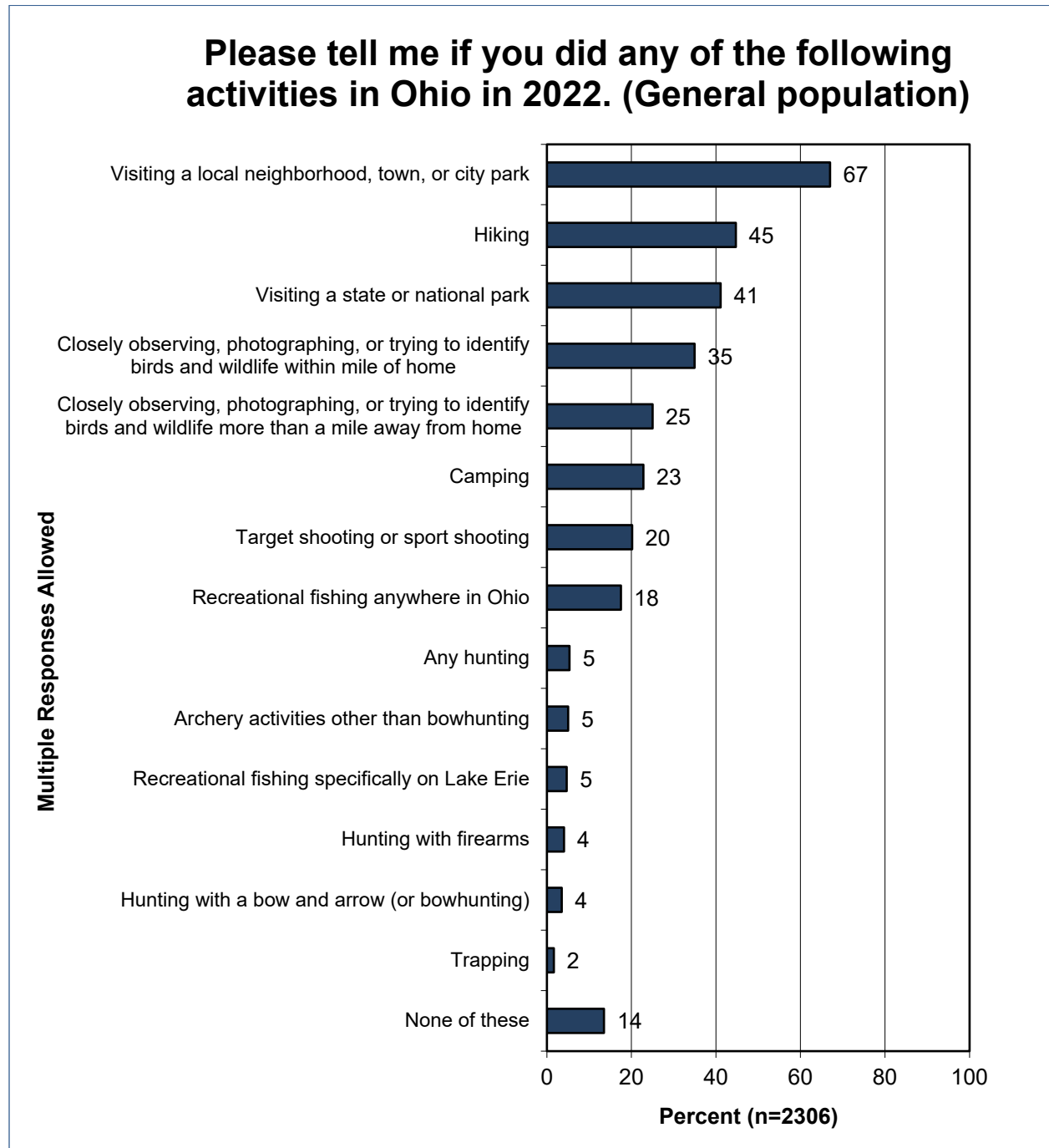
For the online survey phase, email invitations to take the survey were sent to everyone in January 2023. Initial invitations to participate in the survey were sent, and then reminder emails were sent to nonrespondents approximately 4 days after the first invitation and then again approximately 4 days after the first reminder (up to two email reminders were sent, for potentially a total of three emails).

For both the telephone and online versions of the surveys, the questionnaires were programmed to branch and substitute phrases based on previous responses to ensure the integrity and consistency of the data collection. The survey questionnaires also contained error checkers and coded logic statements to ensure quality and consistent data, as well as to check for invalid surveys. After both the telephone and online surveys were obtained, the survey center managers and statisticians checked each survey to ensure clarity and completeness. The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management.

Please see the body of the report for a detailed description of the methods, as well as the extensive quality control procedures that were undertaken.

GENERAL POPULATION: PARTICIPATION IN OUTDOOR RECREATION

This survey was used to determine some basic participation information. The highest participation rates were for visiting a local park; hiking; visiting a state or national park; viewing, photographing, or trying to identify wildlife near home—all done by a third or more of Ohio residents. In total, the survey asked about 15 outdoor activities, as shown in the graph.



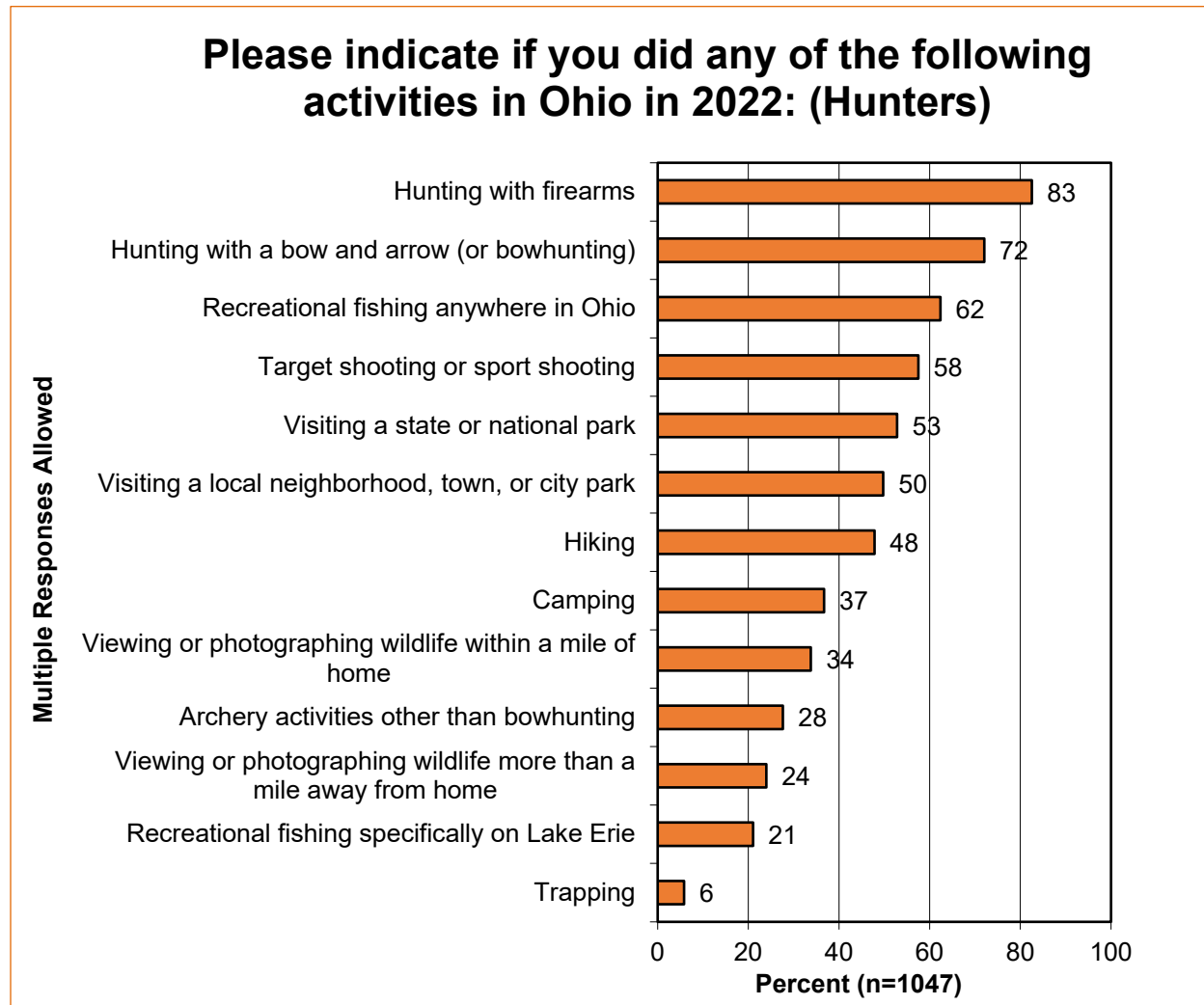
In a follow-up question asked of residents who went sport shooting in Ohio in 2022, 76% shot a handgun, 53% shot a rifle, and 44% shot a shotgun.

PARTICIPATION AND EXPENDITURES OF HUNTERS

Hunters were surveyed as one of the four activity groups included in the project (the others being anglers, sport shooters, and wildlife viewers—detailed in subsequent sections). This sample consisted of those who had, in 2022, hunted or spent money on hunting equipment.

Participation in Outdoor Recreation by Hunters

In addition to hunting, common outdoor activities among hunters include recreational fishing anywhere in Ohio, sport shooting, and visiting parks—all done by at least half of hunters.



Hunting Participation

Most hunters in Ohio are long-time hunters: slightly more than half of them have been hunting for over 25 years. Additionally, most of them (56%) consider themselves to be at an advanced skill level.

The body of this report shows graphs for days hunted in 2022 (the mean is 22.4 days) and the days spent on a typical hunting trip (the mean is 3.5 days, although the majority of 55% say that their typical trip is only a single day).

Species Hunted and Equipment Used

Deer is the most-hunted species in Ohio, sought by 91% of hunters. Additionally, 46% hunt small game/furbearers and 29% hunt wild turkey.

Bow and arrow and shotguns are the most-used types of equipment for hunting in Ohio. In 2022, the large majority of hunters used archery equipment (71%) or shotguns (67%). Multiple types could be used.

Hunting Locations

The majority of hunters travel no more than 20 miles (one way) to go hunting. The mean typical travel distance is 34.4 miles, and the median distance is 15 miles.

Private land far exceeds public land for hunting in Ohio: 92% use private land for at least some of their hunting (including 61% who exclusively use private land), while only 38% use public land (with only 8% exclusively using public land).

The top counties for hunting are in the Appalachian part of the state in the east: 4 of the top 5 counties are on Ohio's eastern border.

Hunting Expenditures

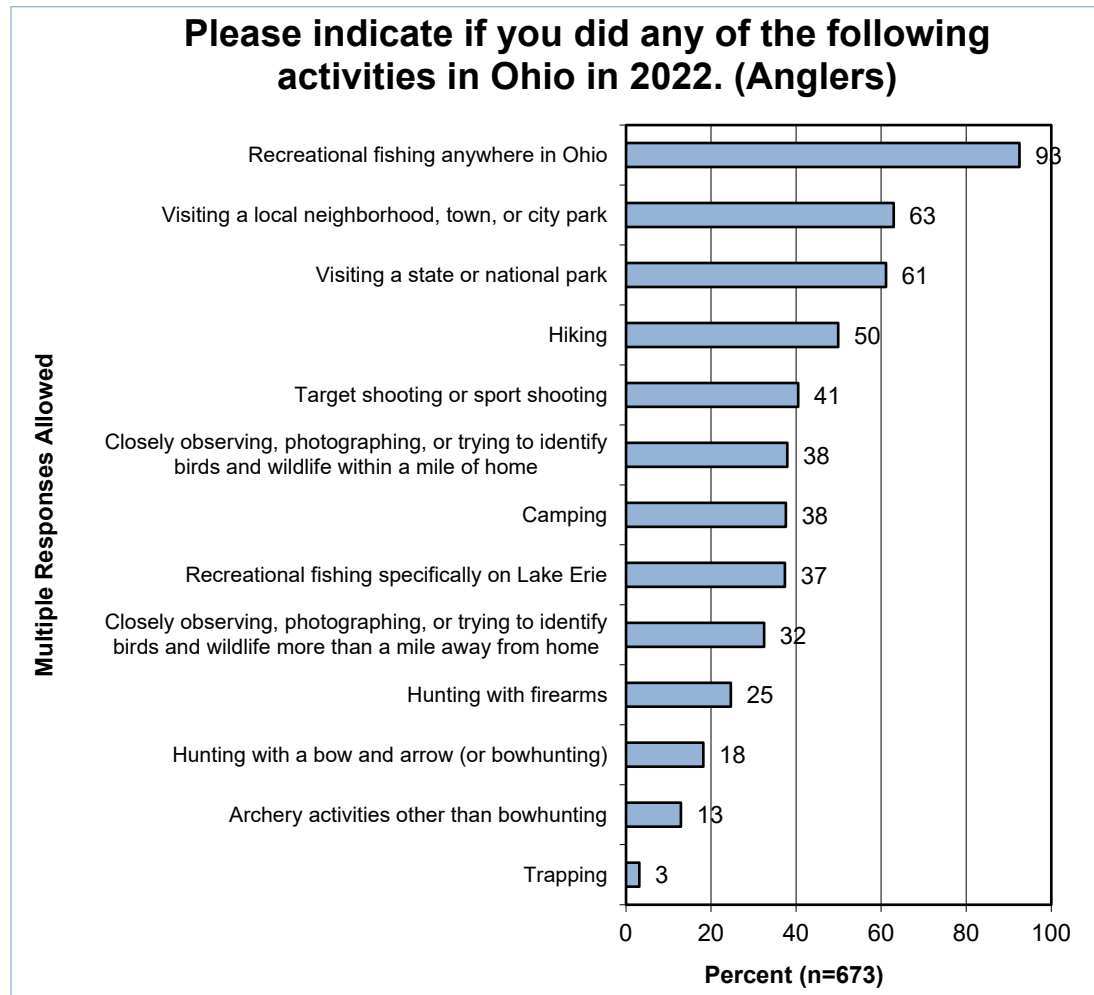
The report looked at proportions spent on used equipment: at least 16% of hunters bought used equipment (9% were not sure, so the proportion could be as high as 25%), and at least 40% made equipment purchases online (with 6% who were not sure, this could be as much as 46%). Appendix A includes full tables of trip and equipment expenditures.

PARTICIPATION AND EXPENDITURES OF ANGLERS

Anglers were another of the surveyed groups. This sample consisted of those who had, in 2022, fished or spent money on fishing equipment.

Participation in Outdoor Recreation by Anglers

Other than fishing, the most popular activities among anglers in Ohio are visiting a local park or a state/national park as well as hiking—all done by at least 50% of anglers. Among Ohio’s anglers as a whole, 37% go fishing in Lake Erie for at least some of their fishing.



Participation in Fishing

The large majority of anglers are long-time participants: 60% of anglers have been fishing for over 25 years. The mean is 32.95 years; the median is 33 years. In the body of this report are graphs for days fished in 2022 as well (the mean is 32.26 days; the median is 20 days).

Most commonly, anglers rate their skill level as intermediate (roughly half do so). About a third consider themselves advanced.

Species Fished and Types of Fishing

Bass is, by far, the leading species, fished for by 65% of Ohio's anglers. Also commonly fished are catfish, saugeye/walleye, crappie, trout, perch, and bluegill. When anglers are asked to name the single species that they most often fish for, bass again is the leading species type, fished the most by about a third of anglers.

Although bank/shoreline fishing is the most common (70% of anglers use this method for at least some of their fishing), more than half of Ohio's angler fish from a boat at last some of the time (57% use a boat while fishing).

Fishing Locations

The top counties for fishing include several along Lake Erie (including the top two: Cuyahoga and Ottawa) and along the Ohio River. The mean typical distance to go fishing is 30.49 miles; the median is 20 miles.

One question was used to combine fishing already done with any planned fishing for the remainder of 2022 after the date of the survey. In this measure, 42% of anglers either had fished in Lake Erie or planned to fish in the lake at some point after the survey. This could be considered the participation rate at its potential highest for fishing in Lake Erie. (As shown previously, 37% had already fished in Lake Erie at the time of the survey.)

Fishing Expenditures

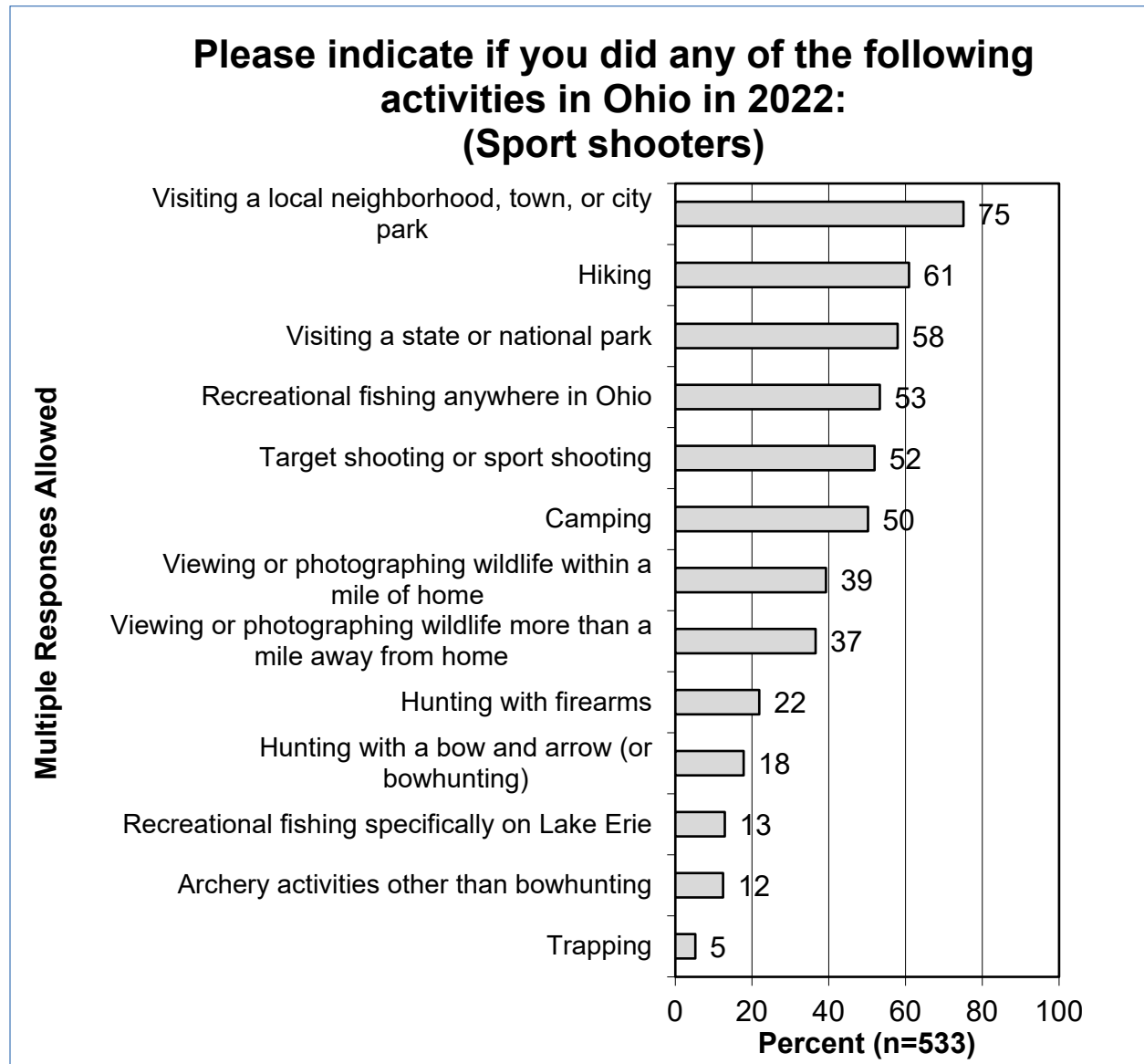
The report looked at proportions spent on used equipment: at least 14% of anglers bought used equipment (9% were not sure, so the proportion could be as high as 23%), and at least 33% made equipment purchases online (with 4% who were not sure, this could be as much as 37%). Appendix A includes full tables of trip and equipment expenditures.

PARTICIPATION AND EXPENDITURES OF SPORT SHOOTERS

This section looks at another group that was surveyed: sport shooters. This sample consisted of those who had, in 2022, gone shooting or spent money on shooting equipment.

Participation in Outdoor Recreation by Sport Shooters

Among sport shooters, the most common outdoor activities are visiting local parks, hiking, visiting state/national parks, fishing, and camping—half of sports shooters had also done those activities.



In follow-up questions, most sports shooters shot handguns, with rifle and shotgun use substantially lower.

Sport Shooting Participation

Many sport shooters are relatively new to the sport: the mean number of years of participation is 12.5 years, and the median is 6 years. Most commonly, sport shooters rate their skill level as intermediate (roughly half do so). Otherwise, they are about evenly split between beginner and advanced. The body of this report includes graphs for days of sport shooting participation in 2022 (the mean is 20.6 days; the median is 10 days).

Shooting Activities and Firearms Used

Handguns are the most-used type of firearm: used by 60% of sport shooters at least some of the time. Next in rate of use are traditional (not an AR-platform) rifles and shotguns—each used by more than a third of sport shooters. AR-platform rifles are used by more than a quarter, and archery equipment is used by about a fifth of sport shooters.

The survey asked about shooting activities: the large majority of sports shooters had gone shooting at an outdoor range (71% had done so). Just under half (45%) used an indoor range. The various clay target sports were done by a fifth to a quarter of sport shooters. Note 40% of the pool of sport shooters did some shooting separate from hunting or preparing to hunt.

Sport Shooting Locations

Nearly a third of shooters travel less than 10 miles to shoot; the mean distance is 22.0 miles and the median is 15 miles. Additionally, most shooters (85%) shoot on private land (51% do so exclusively), compared to 46% who shoot on public land (13% do so exclusively).

The top Ohio counties for sport shooting are Hamilton, Franklin, Trumbull, Mahoning, and Cuyahoga Counties.

Sport Shooting Expenditures

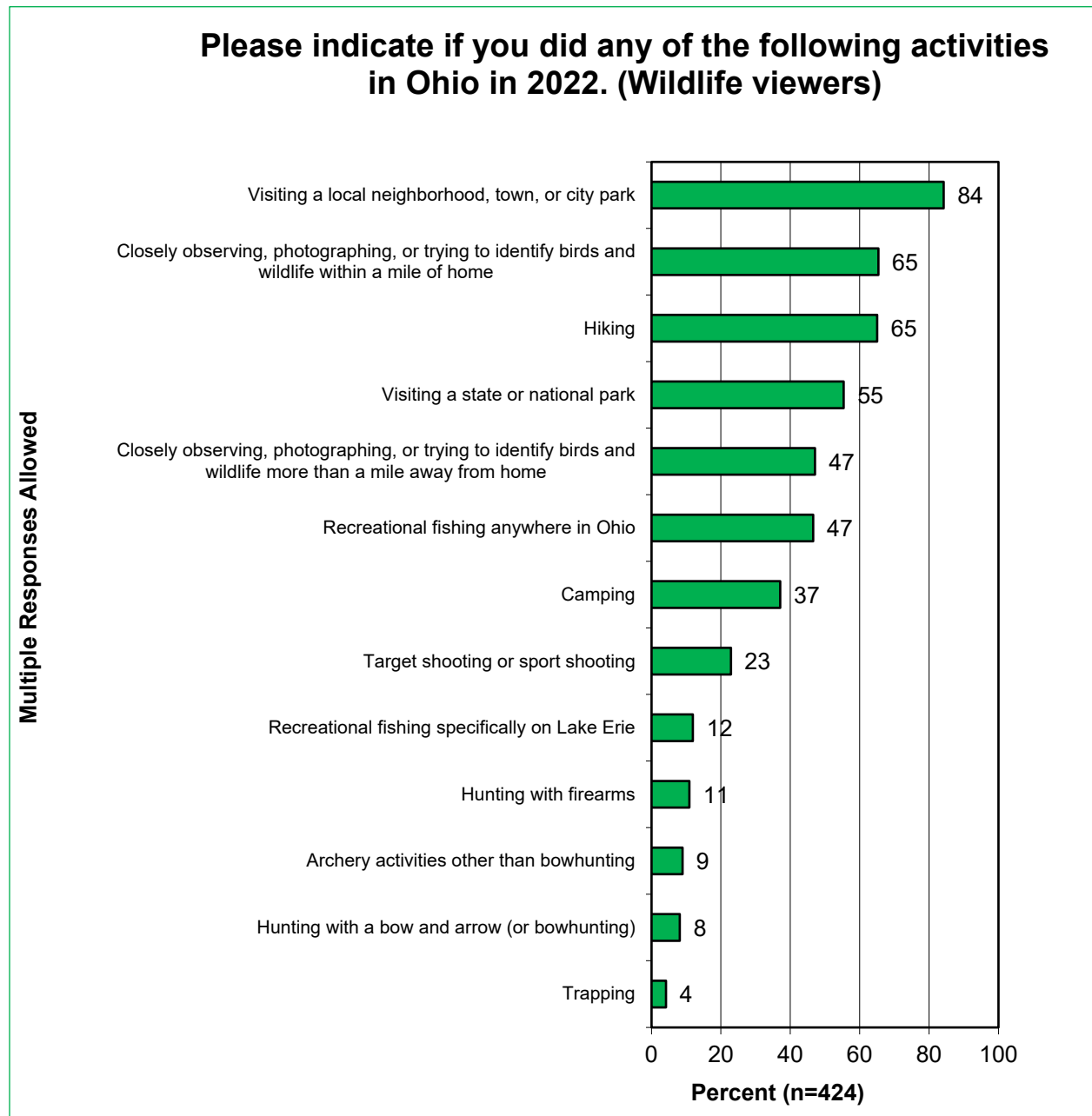
The report looked at proportions spent on used equipment: at least 40% of sport shooters bought used equipment (10% were not sure, so the proportion could be as high as 50%), and at least 38% made equipment purchases online (with 7% who were not sure, this could be as much as 45%). Appendix A includes full tables of trip and equipment expenditures.

PARTICIPATION AND EXPENDITURES OF WILDLIFE VIEWERS

The final section of this report shows the data for the survey of wildlife viewers—those who had viewed wildlife at home or on a trip within the state of Ohio during 2022 or had spent money on wildlife viewing equipment.

Participation in Outdoor Recreation by Wildlife Viewers

A huge majority of wildlife viewers had visited a local park. A second tier of activities, with a majority participating in each, consists of wildlife viewing at home, hiking, and visiting a state or national park.



Wildlife Viewing Participation

The survey asked wildlife viewers about five specific viewing activities that they had done or planned to do. Nearly all (92%) consider themselves to have observed wildlife (or had planned to), and just under two thirds had photographed (or had planned to photograph) wildlife (62%). Rounding out the activities, 40% had maintained plantings for wildlife around home, 40% had fed wildlife, and 23% had maintained a natural area for wildlife.

Years of participation in wildlife viewing encompass a wide range: 35% have done so for no more than 5 years, while 24% have done so for more than 25 years. The mean is 17.48 years, and the median is 10 years.

The days of participation in wildlife viewing in Ohio in 2022 are presented in the body of the report. The mean is 67.74 days, and the median is 30 days.

Most commonly, wildlife viewers consider their level of experience to be intermediate, but the percentage considering themselves beginners is also relatively high. A small percentage consider their experience level to be advanced.

Wildlife Viewing Activities

Birds are the leading type of viewed wildlife in Ohio (particularly birds of prey), with 91% of wildlife viewers seeking to see birds. Also in the top tier are small mammals (80%) and large mammals (73%). Nonetheless, substantial percentages of wildlife viewers also view spiders and insects (51%), other wildlife like reptiles and amphibians (47%), and fish (41%). Rounding out the list is aquatic or semiaquatic animals such as beavers and otters, viewed by 19%.

Wildlife Viewing Locations

The top wildlife viewing counties correspond to those counties that are near to populous areas, particularly because so many wildlife viewers do not travel far to do so: well more than a third of wildlife viewers typically travel less than 10 miles to view wildlife.

Most commonly, wildlife viewers use both types of land, public and private, for their wildlife viewing. About a third exclusively use public land, three times the rate who exclusively use private land. In total, 87% use public land for at least some of their viewing; 66% use private land.

Wildlife Viewing Expenditures

The report looked at proportions spent on used equipment: at least 29% of wildlife viewers bought used equipment (21% were not sure, so the proportion could be as high as 50%), and at least 35% made equipment purchases online (with 9% who were not sure, this could be as much as 44%). Appendix A includes full tables of trip and equipment expenditures.

ECONOMIC IMPACTS OF THESE ACTIVITIES

Collectively, hunting, fishing, sport shooting, and wildlife viewing activities provided the Ohio economy with more than 80,000 jobs across all economic sectors, \$3.8 billion in salaries, wages, and small business income, plus \$1.0 billion in state and local taxes.

Altogether, the activities contributed \$6.7 billion to Ohio's GDP in 2022, and were responsible for \$12.5 billion in total economic activity, or the total value of the rounds of spending as participants' dollars moved through the state economy.

Participants and Spending in the Given Activities in Ohio in 2022			
Activity	Annual Spending per Participant	Total Participants	Total Statewide Spending
Hunting	\$3,509	531,478	\$1,865,067,078
Fishing	\$3,170	1,731,390	\$5,489,108,950
Sport Shooting	\$2,442	1,071,592	\$2,616,397,644
Wildlife Viewing	\$384	4,129,971	\$1,586,737,915
Total	NA*	NA*	\$11,557,311,587

* Not the sum of the column because people can participate in more than one activity; therefore, the total participants and mean spending could not be determined.

Statewide Economic Contributions by Activity						
Activity	Jobs	Labor Income	State GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	12,100	\$591,189,900	\$1,068,255,301	\$171,083,962	\$92,105,972	\$2,023,777,453
Fishing	34,094	\$1,844,898,835	\$3,030,197,492	\$515,410,719	\$281,752,039	\$5,717,384,459
Sport Shooting	22,278	\$1,006,628,480	\$1,647,680,563	\$267,763,713	\$156,021,695	\$3,060,126,469
Wildlife Viewing	11,574	\$541,990,867	\$908,734,586	\$133,020,921	\$87,746,349	\$1,666,053,795
Total	80,046	\$3,984,708,082	\$6,654,867,942	\$1,087,279,315	\$617,626,055	\$12,467,342,176

Looking at residents only, in 2022 resident hunting, fishing, sport shooting, and wildlife viewing activities generated \$12.0 billion of economic activity for Ohio. These activities supported over 77,000 jobs, paying roughly \$3.8 billion in salaries and wages and generating more than \$1.0 billion in state and local tax revenue.

Statewide Economic Contributions of Residents by Activity						
Activity	Jobs	Salaries and Wages	GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	11,330	\$549,814,588	\$995,646,143	\$161,253,025	\$85,206,095	\$1,882,685,396
Fishing	32,513	\$1,770,685,323	\$2,903,522,832	\$493,555,838	\$270,519,508	\$5,480,650,834
Sport Shooting	22,278	\$1,006,628,480	\$1,647,680,563	\$267,763,713	\$156,021,695	\$3,060,126,469
Wildlife Viewing	11,057	\$518,778,098	\$869,719,241	\$127,068,753	\$84,036,994	\$1,592,965,808
Total	77,178	\$3,845,906,489	\$6,416,568,779	\$1,049,641,329	\$595,784,292	\$12,016,428,507

Finally, nonresidents generated approximately \$450 million in economic activity in 2022. These activities supported almost 2,900 jobs, paying \$139 million in salaries and wages and generating \$38 million in state and local tax revenue.

Statewide Economic Contributions of Nonresidents by Activity						
Activity	Jobs	Salaries and Wages	GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	770	\$41,375,312	\$72,609,158	\$9,830,937	\$6,899,877	\$141,092,056
Fishing	1,581	\$74,213,512	\$126,674,660	\$21,854,881	\$11,232,531	\$236,733,625
Sport Shooting	NA	NA	NA	NA	NA	NA
Wildlife Viewing	517	\$23,212,768	\$39,015,345	\$5,952,168	\$3,709,354	\$73,087,987
Total	2,868	\$138,801,592	\$238,299,163	\$37,637,986	\$21,841,762	\$450,913,668

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BACKGROUND

To better serve the public, the Ohio Department of Natural Resources, Division of Wildlife (the Division), seeks to understand the number of participants, their levels of activity, and the economic contributions associated with the outdoor recreation activities and natural resources under its authority.

For each activity listed below, this project estimates the number of participants, their annual days of activity, their total spending on each activity, and their associated economic contributions. The primary activities of interest that were studied include the following (although other activities were studied as well):

- **Hunting.** All statewide hunting activities combined: hunting with firearms and bowhunting.
- **Fishing.** All statewide fishing activities combined, as well as results for fishing activities on Lake Erie that originate in Ohio.
- **Sport shooting.** All sport shooting activities combined: shooting with a rifle, shooting with a shotgun, shooting with a handgun, and target archery. The survey in some places refers to target shooting; for the purposes of this study, target shooting is synonymous with sport shooting.
- **Wildlife viewing.** All wildlife viewing activities combined: around the home and away from home.

This project is a collaborative effort between the Wildlife Management Institute, Responsive Management, and Southwick Associates on behalf of the Division. The project has the following main phases:

1. General population survey to determine outdoor activity participation rates.
2. Detailed participation and expenditure survey of hunters.
3. Detailed participation and expenditure survey of anglers.
4. Detailed participation and expenditure survey of sport shooters.
5. Detailed participation and expenditure survey of wildlife viewers.
6. Economic analysis of the data collected in the first five phases.

Note that the surveys for the first five phases were limited to Ohio residents, whereas nonresident impacts were estimated in the final economic analysis phase.

SURVEY METHODOLOGIES

This section discusses the methodology for all of the surveys. It also details the data analyses with the exception of the methods for the economic analyses, the latter of which are included in the economic analyses section.

SURVEYS CONDUCTED

The study entailed five separate multi-modal surveys of Ohio residents and Ohio resident recreationists ages 18 or older.

1. General population survey of Ohio residents, ages 18 and older, conducted via online and telephone to determine outdoor activity participation rates.
2. Ohio resident licensed hunter survey, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to hunting in Ohio.
3. Ohio resident licensed angler survey, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to fishing in Ohio.
4. Ohio resident sport shooters, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to sport shooting activities, including archery, in Ohio.
5. Ohio resident wildlife viewers, ages 18 and older, conducted via online and telephone to determine detailed participation characteristics and expenditures related to wildlife viewing activities in Ohio.

The general population survey of Ohio residents was conducted in November and December 2022. The Ohio licensed hunter, licensed angler, sport shooter, and wildlife viewer surveys were conducted in January 2023. Responsive Management obtained the following total completed questionnaires for each survey:

Survey	Number of Completed Questionnaires
Ohio General Population	2,306
Ohio Licensed Hunters	1,047
Ohio Licensed Anglers	673
Ohio Sport Shooters	533
Ohio Wildlife Viewers	424

Specific aspects of the survey methodology are discussed below.

DESIGN OF SURVEY QUESTIONNAIRES

All five survey questionnaires were developed cooperatively by Responsive Management, Southwick Associates, the Wildlife Management Institute, and the Division, based on the research team's familiarity with outdoor recreation and fish and wildlife management. All five questionnaires were administered via both telephone and online. There were slight differences in wording between the telephone and online versions of the surveys to accommodate each survey mode, but otherwise the telephone and online versions of each survey were identical.

The surveys measured participation in the same outdoor recreation activities. After the initial measure of participation, the four activity-specific expenditure surveys (hunting, fishing, sport shooting, and wildlife viewing) were very similar in structure and concept but asked specifically about the characteristics of participation in, and expenditures related to, the relevant activity (e.g., licensed hunters were asked about participation and expenditures related to hunting only).

The survey questionnaires were all computer coded in an online platform. The telephone questionnaires were coded for integration with Responsive Management's computer-assisted telephone interviewing system and were administered by Responsive Management interviewers with extensive experience conducting surveys about hunting, fishing, shooting, wildlife viewing, and outdoor recreation in general.

An important aspect of Responsive Management's survey platform is that the computer controls which questions are asked and allows for immediate data entry in both the telephone and online versions of each survey (in the telephone survey, although a computer controls which questions are asked, the survey is administered by a live interviewer). Responsive Management conducted pre-tests of the questionnaires to ensure proper wording, flow, and logic in the surveys. Additionally, the questionnaires included proprietary error checkers and internal quality control checks to help ensure that the data obtained were of high quality.

SURVEY SAMPLES

General Population of Ohio Residents

The samples of Ohio general population residents (telephone, text, and online) were obtained from and are maintained by Marketing Systems Group (MSG), a firm that specializes in providing scientifically valid samples for survey research. For the telephone survey, both landlines and cell phones were sampled in their proper proportions.

Ohio Resident Licensed Hunters and Anglers

The samples of Ohio resident licensed hunters and anglers were obtained from hunting and fishing license data provided by the Division. The population of licensed hunters and anglers consisted of Ohio resident licensed hunters and anglers, and the data also included public shooting range permit holders, which was used for the sample of sport shooters (please see below). The provided data included those who had a valid license or permit for one or more of these activities in 2022 (including lifetime license holders).

Prior to sample selection, those who held licenses and/or permits for more than one of the three categories (i.e., hunting, fishing, or a shooting range permit) were randomly assigned one of the three activities for the purposes of sample selection for each survey. Next, a probability-based selection process was used to ensure that each license and/or permit holder had an equal chance of being selected.

MULTI-MODAL SURVEY ADMINISTRATION

All surveys for this project consisted of both a telephone survey effort and a closed online survey effort. In this context, “closed” means that a person surfing the internet could not access the survey. For both the telephone and online portions of the surveys, only those specifically invited and contacted could complete the survey.

For the general population of Ohio residents surveyed to measure participation, as well as the Ohio wildlife viewers and the portion of sport shooters obtained through Ohio resident sampling for the expenditure surveys, respondents were contacted either by telephone or by email. After all telephone efforts were exhausted, those with a cell phone number were contacted via text and invited to do the survey online.

For the randomized pulled samples of licensed hunters, licensed anglers, and public shooting range permit holders, a specific process to ensure successful contact with as many selected respondents as possible was implemented. This process included obtaining telephone and/or email address information for those without either among the randomly selected respondents, as well as contacting them using more than one method when other methods were unsuccessful.

First, records for all selected respondents from the license/permit data with a mailing or physical address but no other contact information were processed through a reverse look-up system that obtained telephone numbers and/or email addresses for as many of these records as possible.

Second, all selected respondents from the license/permit data with an email address (including those for whom the reverse look-up provided an email address) were contacted first via email and invited to complete the survey online. All selected respondents with a valid email address were contacted via email three separate times.

Next, selected respondents from the license/permit data with only a phone number and no email address (including those for whom the reverse look-up provided at least one phone number), those without an email address, those with an invalid or failed email address and those who were nonresponsive after three email invitations were contacted to complete the survey via telephone.

Telephone Survey Administration

For the telephone phase of the surveys, telephone interviews were conducted Monday through Friday from noon to 9:00 p.m., and Saturday from noon to 7:00 p.m. local time, using interviewers with experience conducting computer-assisted surveys about hunting, fishing, sport shooting, wildlife viewing, and outdoor recreation in general. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day.

The telephone phase of the general population survey of Ohio residents to measure participation was conducted in November and December 2022. The telephone portions of the hunter, angler, sport shooter, and wildlife viewer surveys were conducted in January 2023.

For quality control of the telephone surveys, survey center managers monitored the interviews in real time and provided feedback to the interviewers. To further ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the highest standards of survey research. Methods of instruction included lecture and role-playing. The survey center managers and other professional staff conducted briefings with the interviewers prior to the administration of this survey.

Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey questionnaire, reading of the survey questions, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey questionnaire.

Online Survey Administration

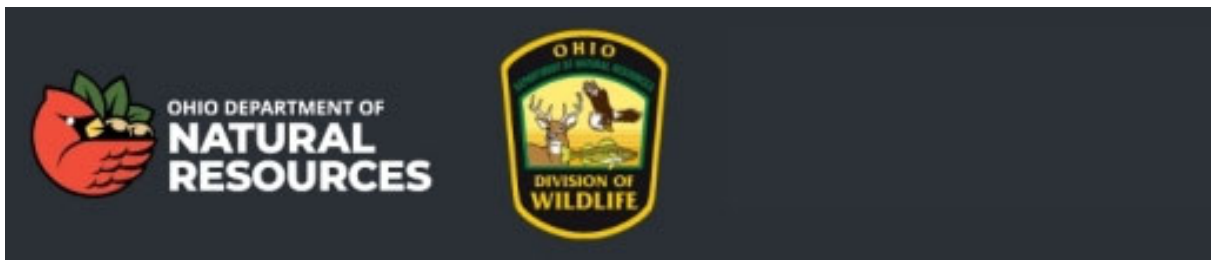
For the online survey phase, email invitations to take the survey were sent to everyone in the online samples. The dates of the emails varied depending on the survey being administered, with all of them being sent in January 2023. An example of this initial email invitation used for licensed hunters and anglers is on the next page. Reminder emails were sent to nonrespondents approximately 4 days after the first invitation and then again approximately 4 days after the first reminder (up to two email reminders were sent, for a total of three emails).

Survey Quality Control

For both the telephone and online versions of the survey, the questionnaire was programmed to branch and substitute phrases based on previous responses to ensure the integrity and consistency of the data collection. The survey questionnaire also contained error checkers and coded logic statements to ensure quality and consistent data.

As mentioned previously for telephone surveys specifically, survey center managers monitored the interviews in real time, and Responsive Management is staffed with interviewers who have been trained according to the highest standards of survey research. Interviewers were also trained on each survey specifically regarding question content, skip patterns, and other issues relevant to the survey being administered.

Initial Email Invitation Example for the Online Survey



Hello John,

As a licensed hunter in Ohio, we would like to invite you to participate in our survey.

[Click Here to Start the Survey](#)

The Ohio Department of Natural Resources, Division of Wildlife is conducting this study to assess licensed hunters' participation, experiences, and expenses related to hunting. Your response to this survey will help the Division of Wildlife understand hunting participation, provide hunting opportunities, and show how important hunting is to the local and state economies. We have contracted Responsive Management to administer this survey for us.

As a licensed Ohio hunter, your input is very important to this study. Even if you did not actually get to go hunting in 2022, your input as a hunter for a few questions will still be helpful.

Please consider taking the survey now—we hope to complete the study quickly!

[Click Here to Start the Survey](#)

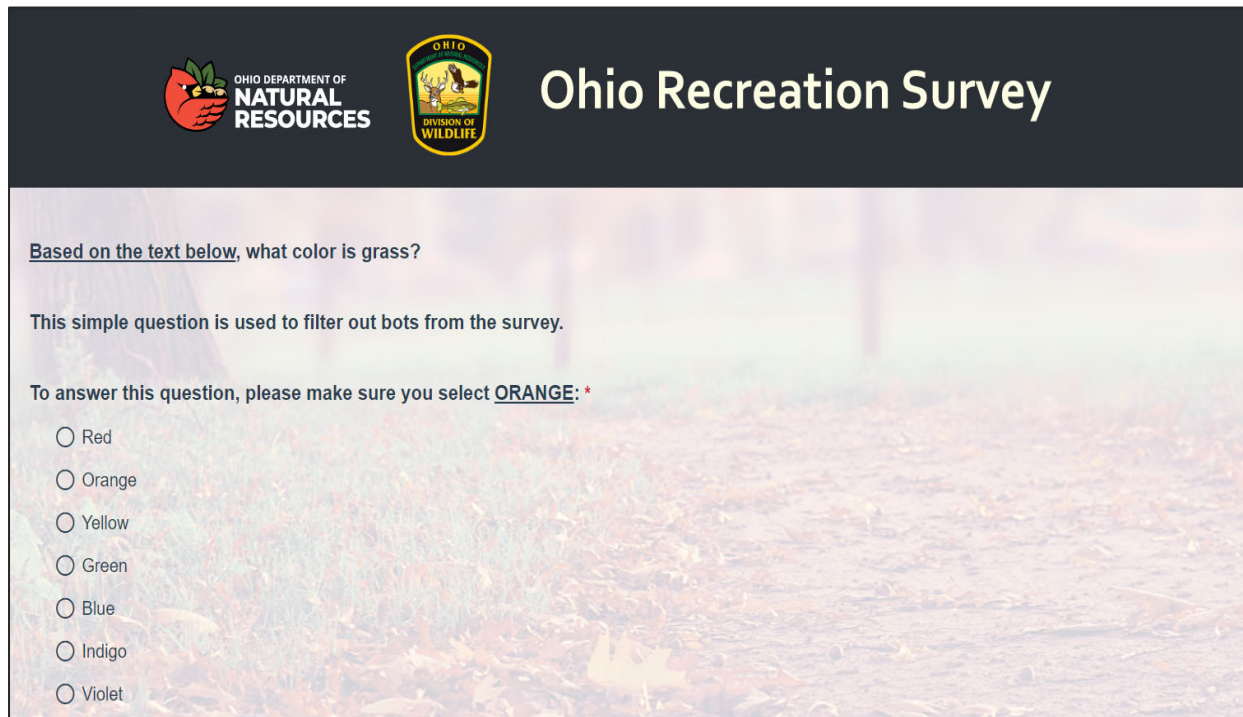
OR copy and paste the following link into your browser to access the survey:
[full survey URL provided]

Thank you, the ODNR Division of Wildlife appreciates your time and feedback!

Peter Novotny
Assistant Chief
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229

As another quality control measure, Responsive Management used an additional question for the online survey to identify and filter out bots that may be automatically generating illegitimate results. This “attention check” question is shown in the screenshot below. For this check, respondents were instructed to select orange as the color of grass; any surveys with responses other than orange were subsequently ended, marked as disqualified, and removed from the final data.

Attention Check Question for the Online Survey



The screenshot shows a survey interface with a dark header. On the left, there are logos for the Ohio Department of Natural Resources and the Ohio Division of Wildlife. The title "Ohio Recreation Survey" is displayed in large white text. The main content area has a light background with a blurred image of a field. The text reads: "Based on the text below, what color is grass?" followed by "This simple question is used to filter out bots from the survey." and "To answer this question, please make sure you select **ORANGE**:" with an asterisk. Below this is a list of color options with radio buttons: Red, Orange, Yellow, Green, Blue, Indigo, and Violet.

After both the telephone and online surveys were obtained, the survey center managers and statisticians checked each survey to ensure clarity and completeness.

In addition to the above measures, analysts reviewed all individual survey responses to identify other potential red flags. For example, surveys that were completed in an unrealistically brief timeframe suggest that respondents were clicking through responses without reading and evaluating the questions. A related concern, “straight-lining,” is when respondents select (for example) the first or same response options throughout the survey. Surveys of questionable quality were removed prior to data analysis.

Completed Interviews

Responsive Management obtained the number of completed interviews by district for each survey shown in the table that follows. Sampling errors are also shown; note that sampling errors are calculated on statewide data only.

Total Completed Questionnaires and Sampling Errors

Survey	Number of Completed Surveys						Statewide Sampling Error (percentage points)
	District 1	District 2	District 3	District 4	District 5	Total Statewide	
General Population	492	412	496	417	489	2,306	+/- 2.04
Licensed Hunters	218	246	205	165	213	1,047	+/- 3.02
Licensed Anglers	136	126	140	141	130	673	+/- 3.78
Sport Shooters	117	75	126	112	103	533	+/- 4.24
Wildlife Viewers	84	89	94	70	87	424	+/- 4.76

Data Analysis

The analysis of data was performed using IBM SPSS Statistics as well as proprietary software developed by Responsive Management. Throughout this report, findings of the surveys are reported at a 95% confidence interval. The sampling errors were calculated using the formula described on the following page.

- For the survey of the overall sample of adult Ohio residents, the sampling error is estimated to be at most plus or minus 2.04 percentage points, based on a sample size of 2,306 residents and a statewide population of 9,081,287 adult residents.
- For the overall sample of Ohio resident licensed hunters, the sampling error is estimated to be at most plus or minus 3.02 percentage points, based on a sample size of 1,047 hunters and a statewide population of 486,087 hunters in the license database.
- For the overall sample of Ohio resident licensed anglers, the sampling error is estimated to be at most plus or minus 3.78 percentage points, based on a sample size of 673 anglers and a statewide population of 1,590,240 anglers in the license database.
- For the overall sample of Ohio sport shooters, the sampling error is estimated to be at most plus or minus 4.24 percentage points. This is based on a sample size of 533 sport shooters and an estimated population size of 1,832,225 sport shooters.
- The sampling error for the sample of Ohio wildlife viewers is estimated to be at most plus or minus 4.76 percentage points, based on a sample size of 424 wildlife viewers and an estimated population of 3,864,019 wildlife viewers.

The statewide population estimates for sport shooters and wildlife viewers are based on the results of the Ohio resident general population survey results, which measured participation in these activities by district and statewide among Ohio residents, allowing the researchers to use the participation rates to estimate the total number of participants in each activity.

Sampling Error Equation

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

Where: B = maximum sampling error (as decimal)
 N_p = pop. 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).

For analysis, weighting was applied, when appropriate, to ensure that the districts matched the population.

For the general population of Ohio residents, the results were weighted by age and gender within each district, and then the data were weighted by district populations and the percentages of Black and Hispanic residents at the statewide level to ensure that final statewide results exactly matched U.S. Census data for adult Ohio residents as a whole. The final statewide sample was representative of all Ohio residents 18 years old and older.

For licensed Ohio resident hunters and anglers, the data were weighted by district license holder populations based on the overall license data. For Ohio sport shooters and wildlife viewers, the data were weighted by district based on the participation rates in those activities in each district determined in the survey of the general population of Ohio residents. The weighting of the data for sport shooters also accounted for the total number of public shooting range permit holders in the database in correct proportion to the total number of participants estimated using the general population survey.

Note that the data analyses methods for the economic analyses are described in that section of the report.

PRESENTATION OF RESULTS

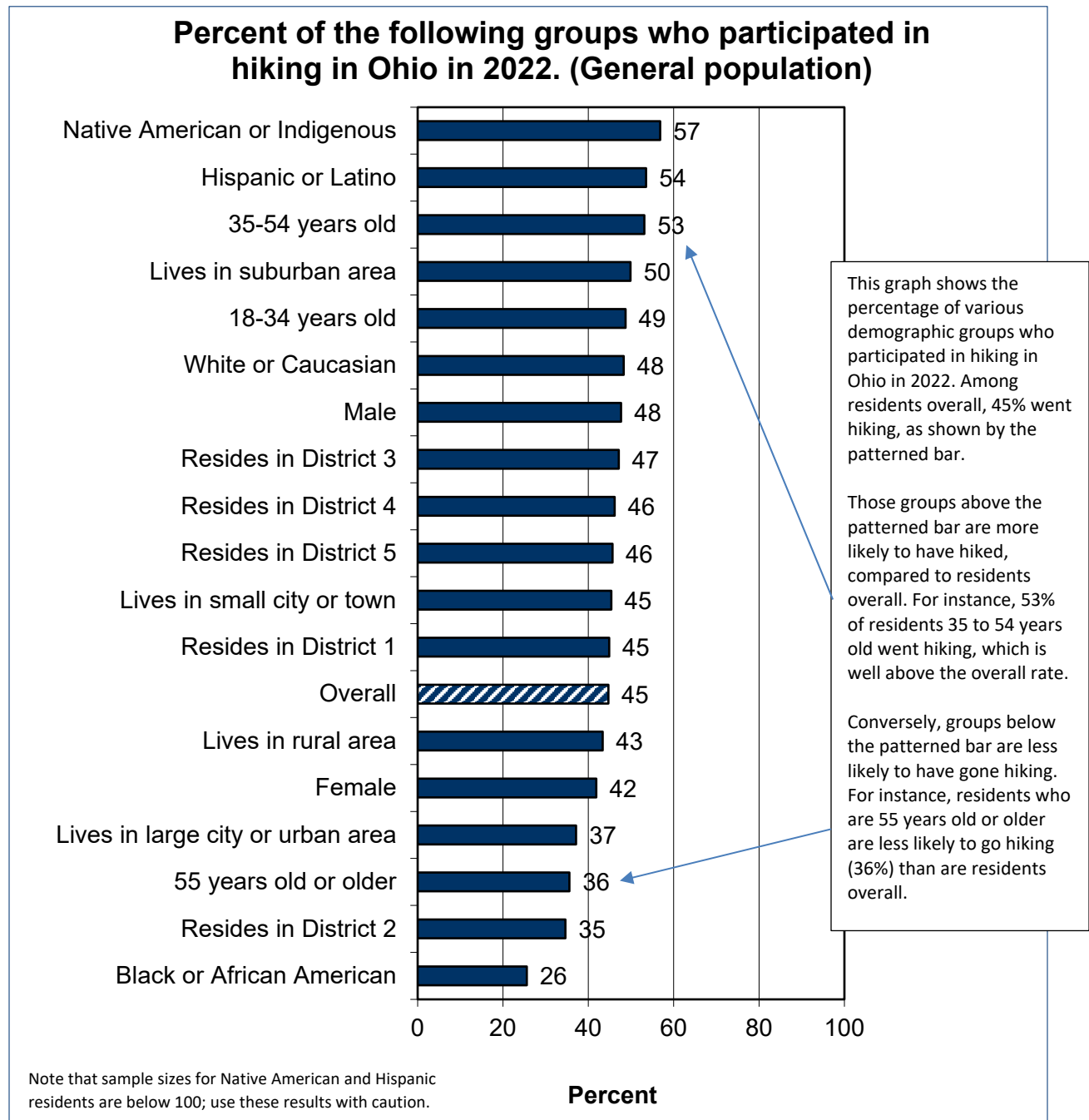
Some questions allow only a single response, while others allow respondents to give more than one response or choose all that apply. Those that allow more than a single response are indicated on the graphs with the label, "Multiple Responses Allowed."

For the activity participation questions, demographic analyses were conducted and are presented on graphs that show how several disparate groups answered the same question. An example of one of these demographic analyses graphs is shown on the following page. The example shows that 45% of residents overall participated in hiking in Ohio during 2022, as indicated by the patterned bar.

Those groups above the overall bar are more likely to have participated in hiking than are residents overall. For example, 53% of Ohio residents 35 to 54 years old participated in hiking,

substantially higher than Ohio residents as a whole. Likewise, those groups below the overall bar are less likely to have participated in hiking, such as Ohio residents 55 years old or older, whose rate of hiking is 36%.

When one group is above the overall bar (for instance, in this example, residents 35 to 54 years old), its counterpart or one of its counterparts (in this instance, residents 55 years old or older) 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, those who live in a rural area 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.



GENERAL POPULATION SURVEY MEASURING PARTICIPATION IN OUTDOOR RECREATION

PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES

The primary question in the survey asked residents if they had participated in various outdoor recreation activities in Ohio during 2022. The highest participation rates were for visiting a local neighborhood, town, or city park; hiking; visiting a state or national park; and viewing, photographing, or trying to identify wildlife. (District 4, which is largely rural, showed markedly higher participation rates in fishing, camping, sport shooting, and hunting compared to the other districts.) The activity groups and the percentages who participated in each are shown below:

General Activities

- Visiting a local neighborhood, town, or city park (67%)
- Hiking (45%)
- Visiting a state or national park (41%)
- Camping (23%)

Hunting and Trapping

- Any hunting (5%)
- Hunting with firearms (4%)
- Hunting with a bow and arrow (or bowhunting) (4%)
- Trapping (2%)

Fishing

- Recreational fishing anywhere in Ohio (18%)
- Recreational fishing specifically on Lake Erie (5%)

Sport Shooting

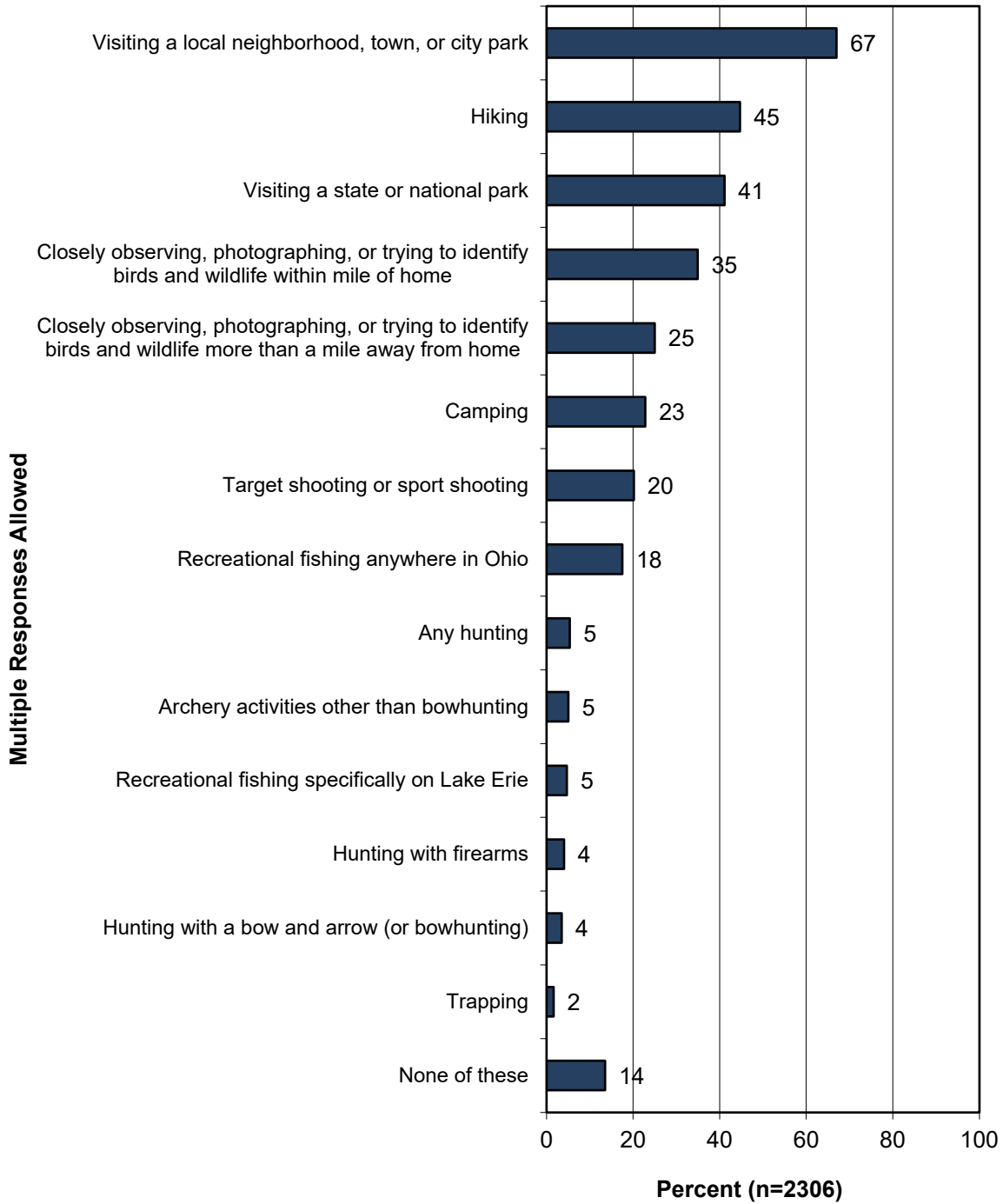
- Target or sport shooting (including indoor and outdoor ranges and informal shooting) (20%)
- Archery activities other than bowhunting (5%)

Wildlife Viewing

- Observing, photographing, or trying to identify wildlife anywhere in Ohio (43%)
- Observing, photographing, or trying to identify wildlife within a mile of home (35%)
- Observing, photographing, or trying to identify wildlife more than a mile from home (25%)

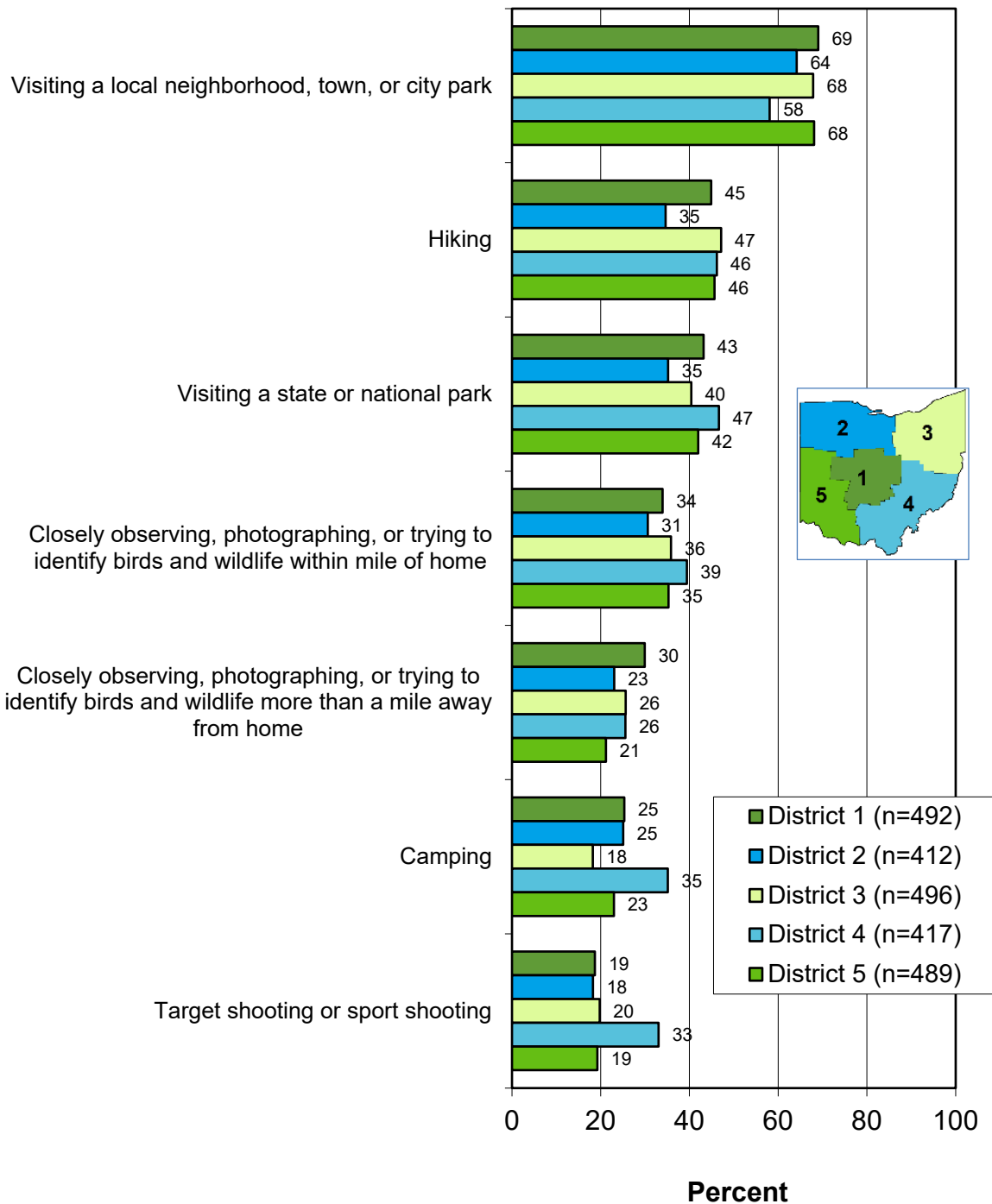
To avoid bias, the order of these activity groups was randomized in the survey. The following page shows a graph of these results in descending order of participation. This is followed by district results and a demographic analyses graph for each activity.

Please tell me if you did any of the following activities in Ohio in 2022. (General population)

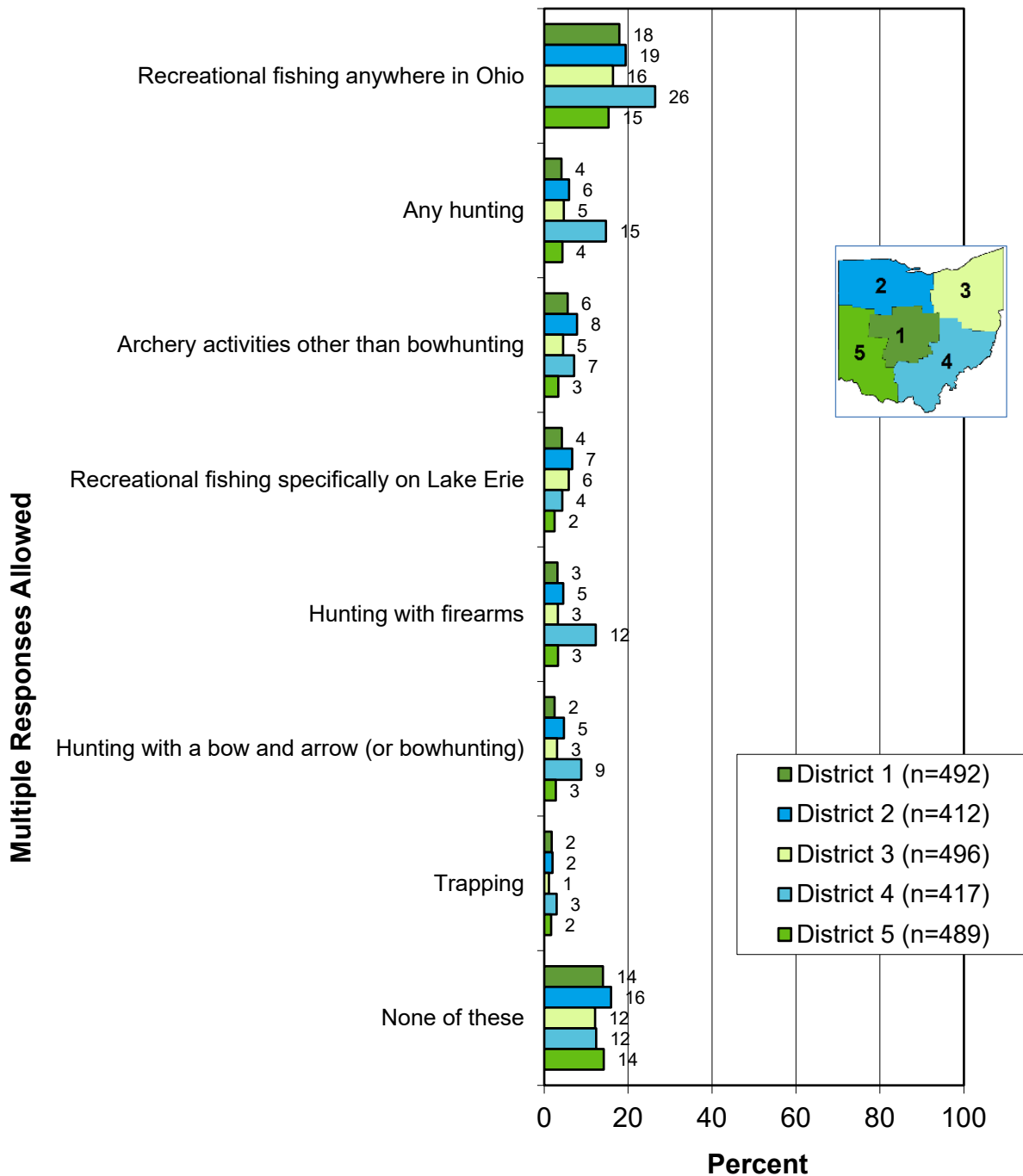


Please tell me if you did any of the following activities in Ohio in 2022. (General population) (Part 1)

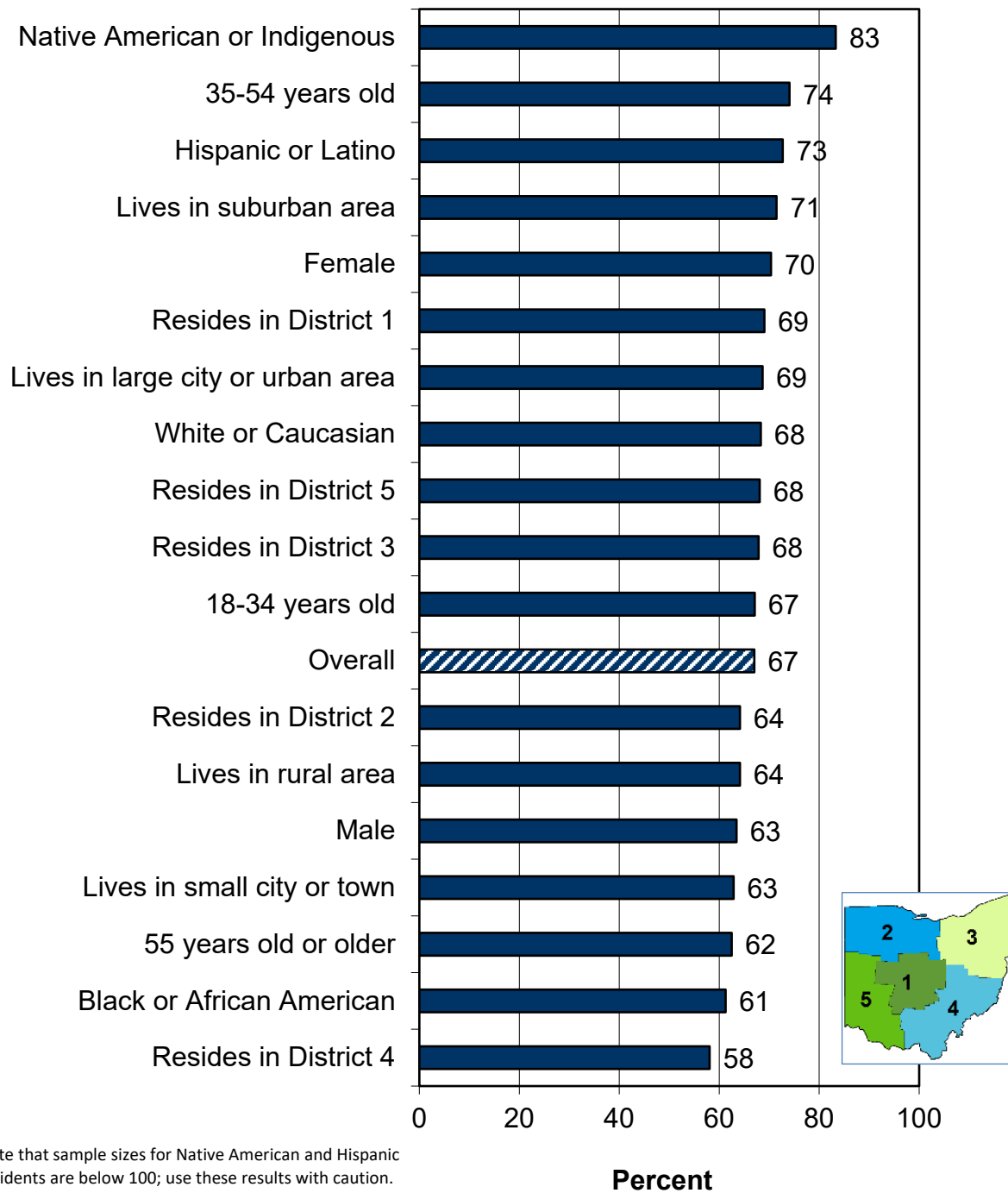
Multiple Responses Allowed



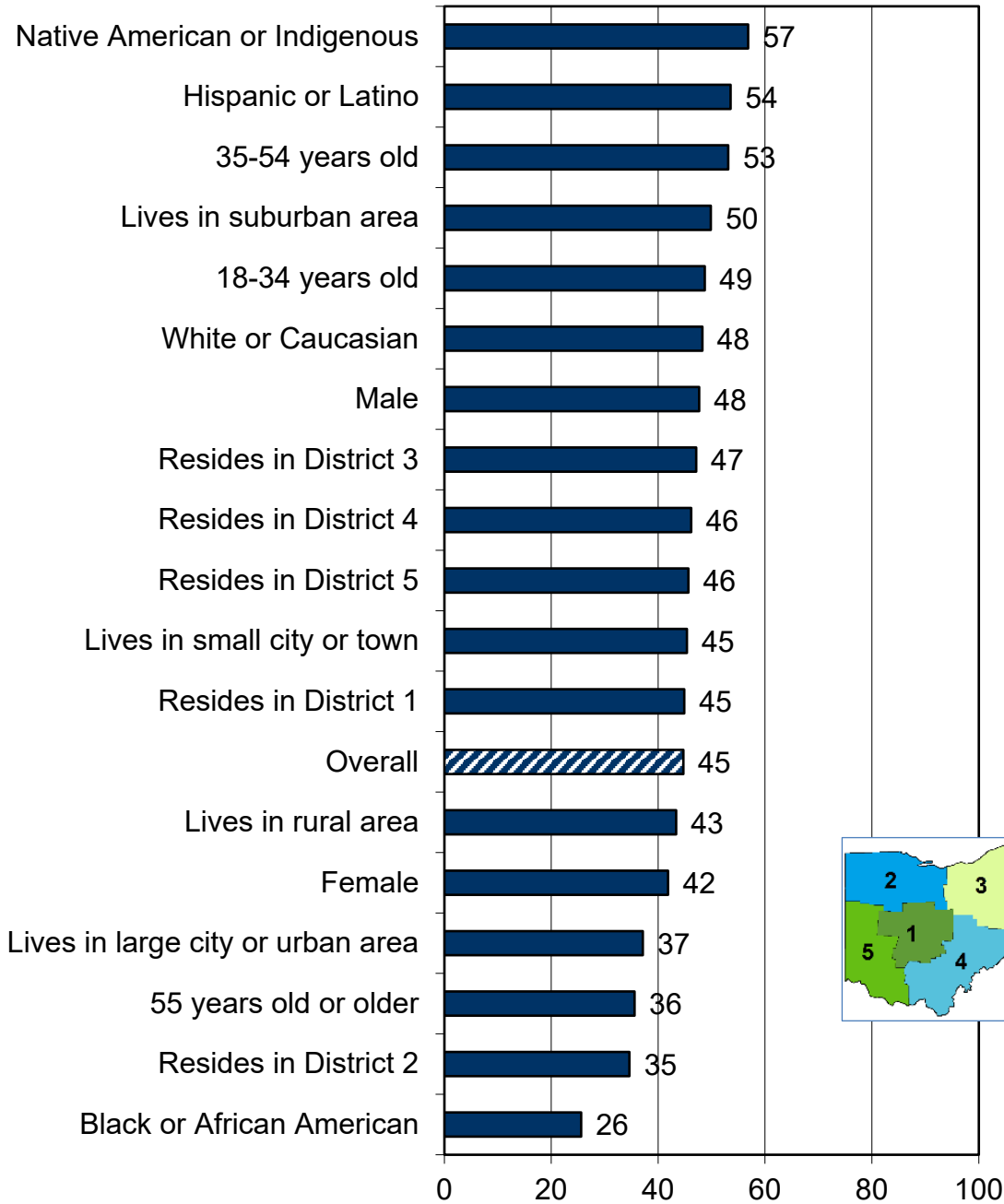
Please tell me if you did any of the following activities in Ohio in 2022. (General population) (Part 2)



Percent of the following groups who visited a local neighborhood, town, or city park in Ohio in 2022. (General population)



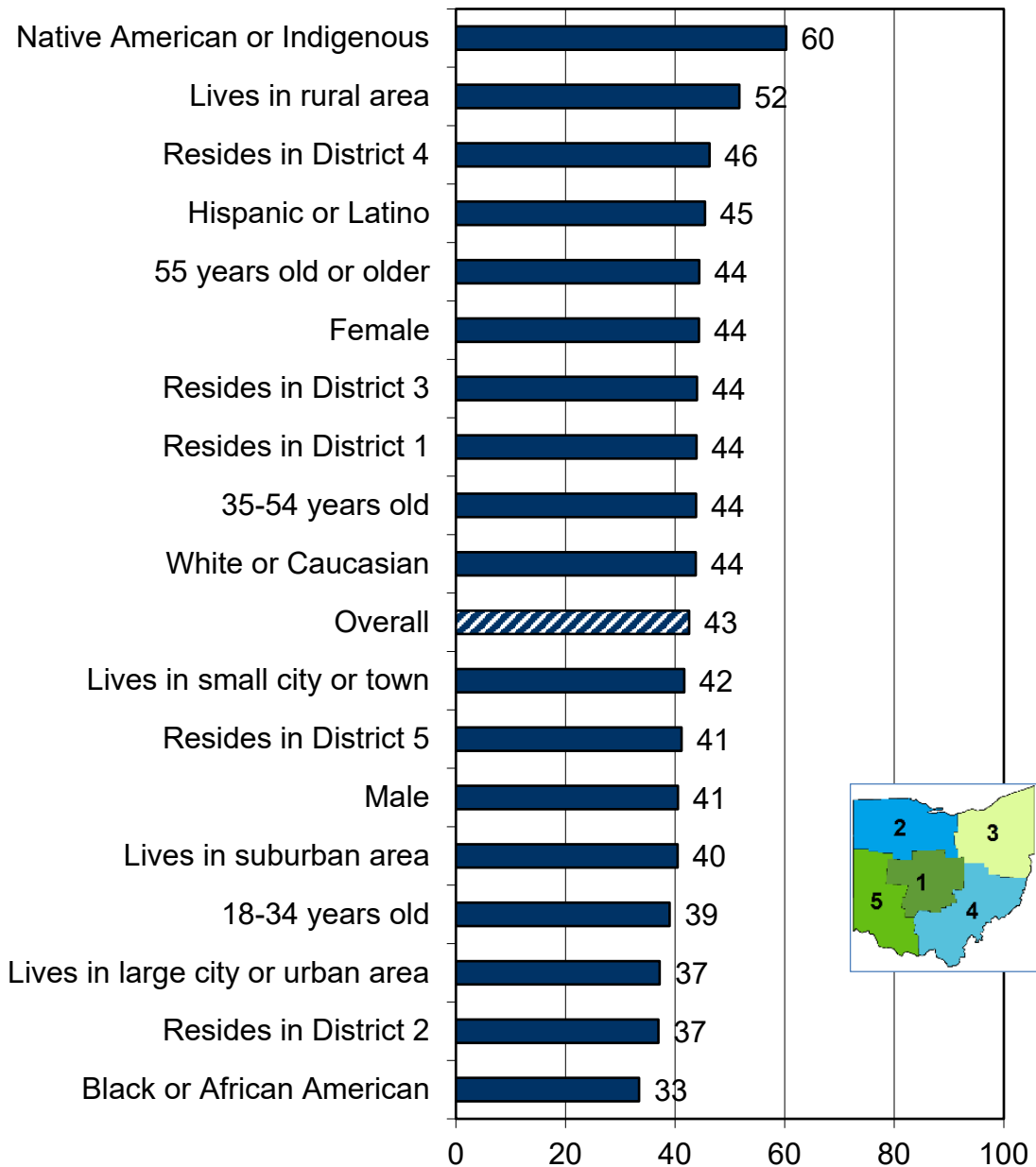
Percent of the following groups who participated in hiking in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

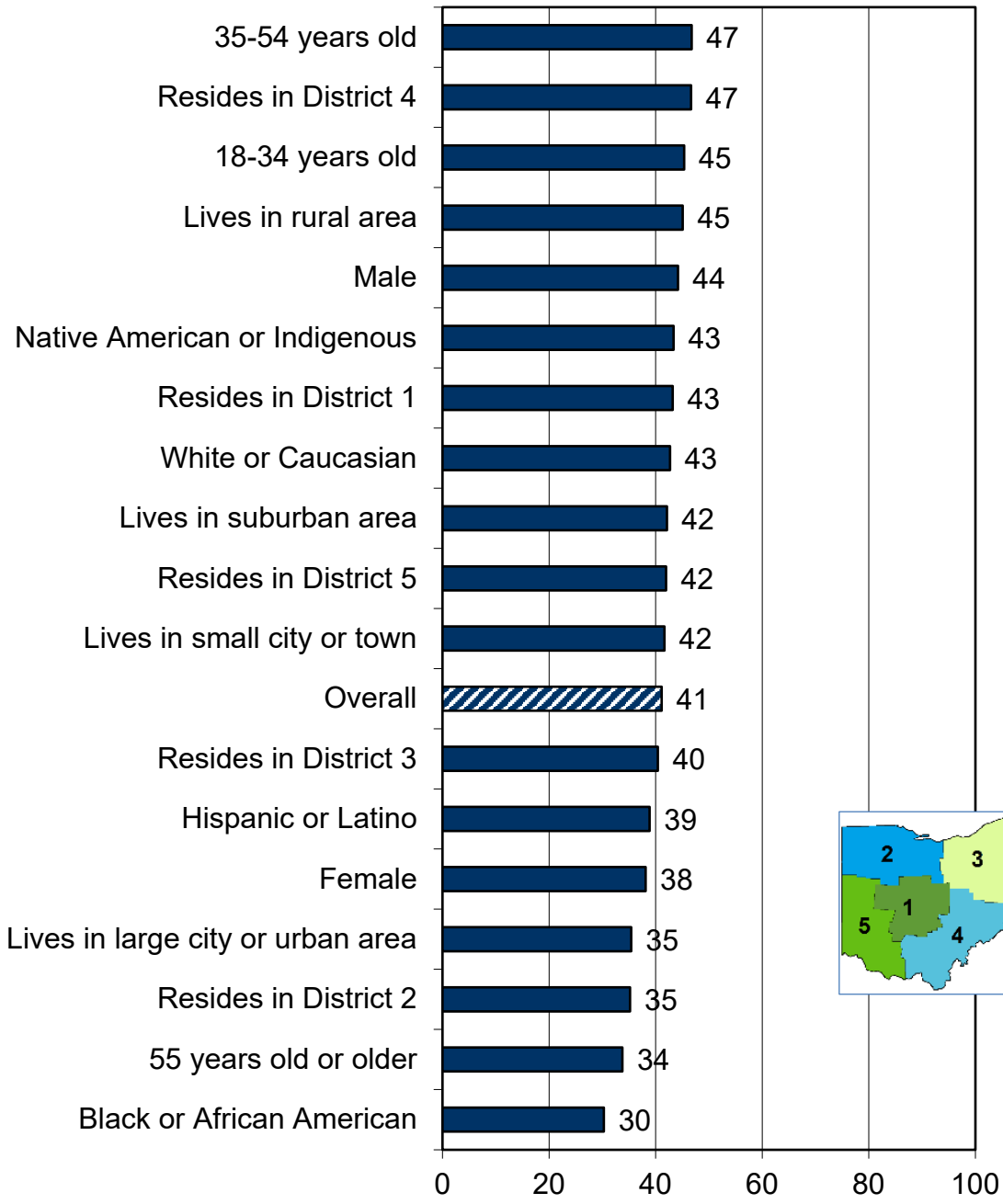
Percent of the following groups who participated in closely observing, photographing, or trying to identify birds and wildlife anywhere in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

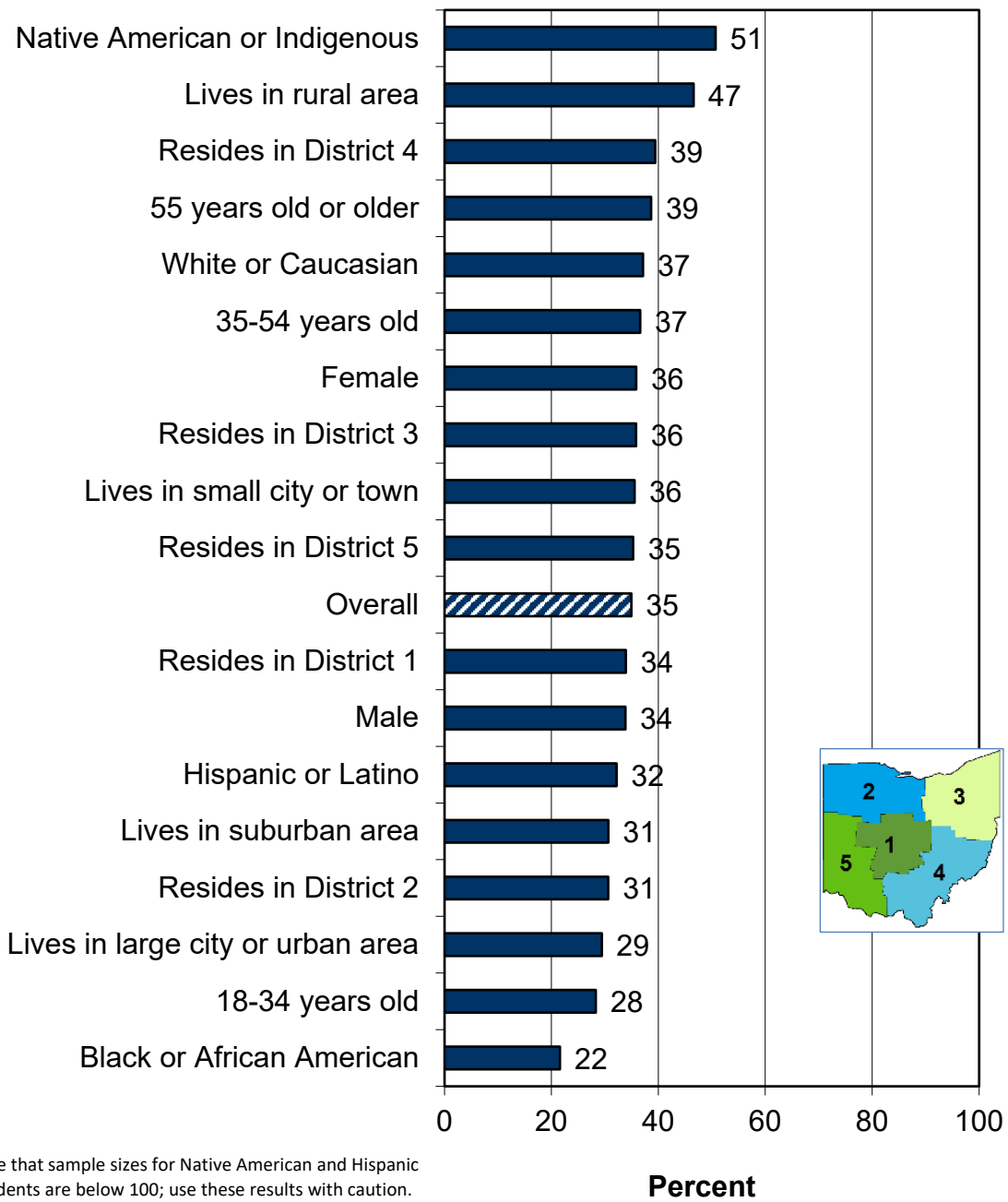
Percent of the following groups who visited a state or national park in Ohio in 2022. (General population)



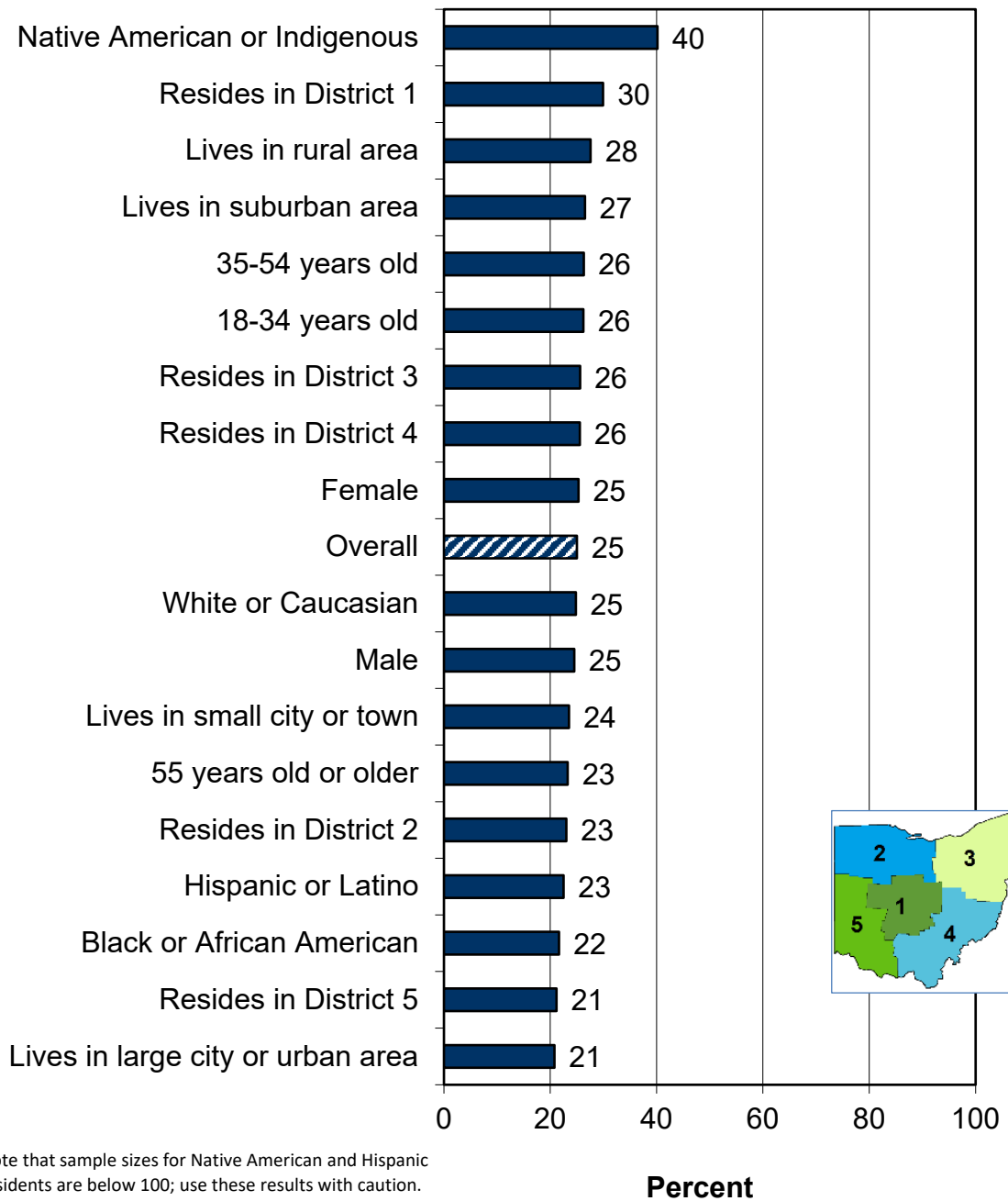
Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

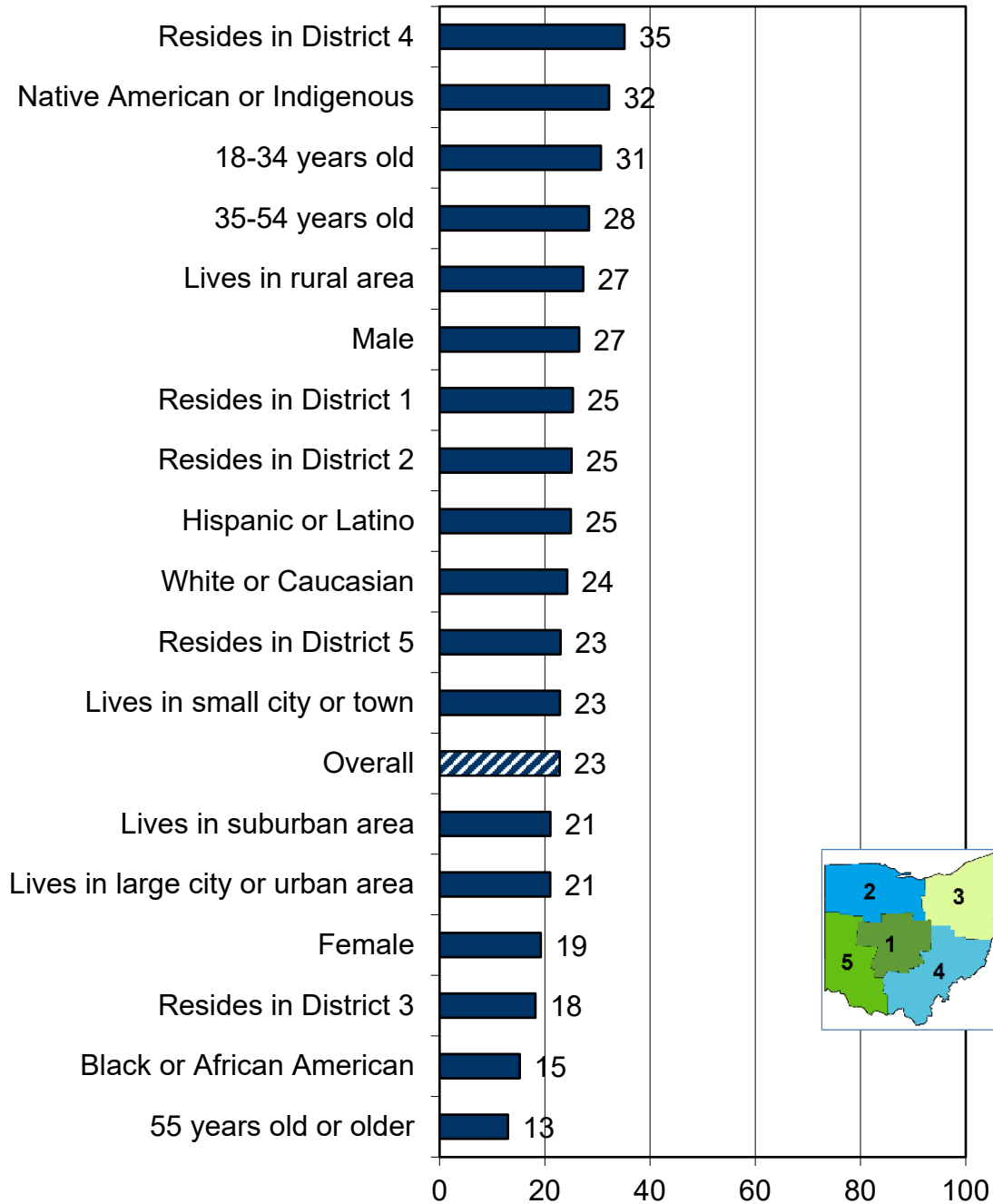
Percent of the following groups who participated in closely observing, photographing or trying to identify birds and wildlife within a mile from home in Ohio in 2022. (General population)



Percent of the following groups who participated in closely observing, photographing or trying to identify birds and wildlife more than a mile away from home in Ohio in 2022. (General population)



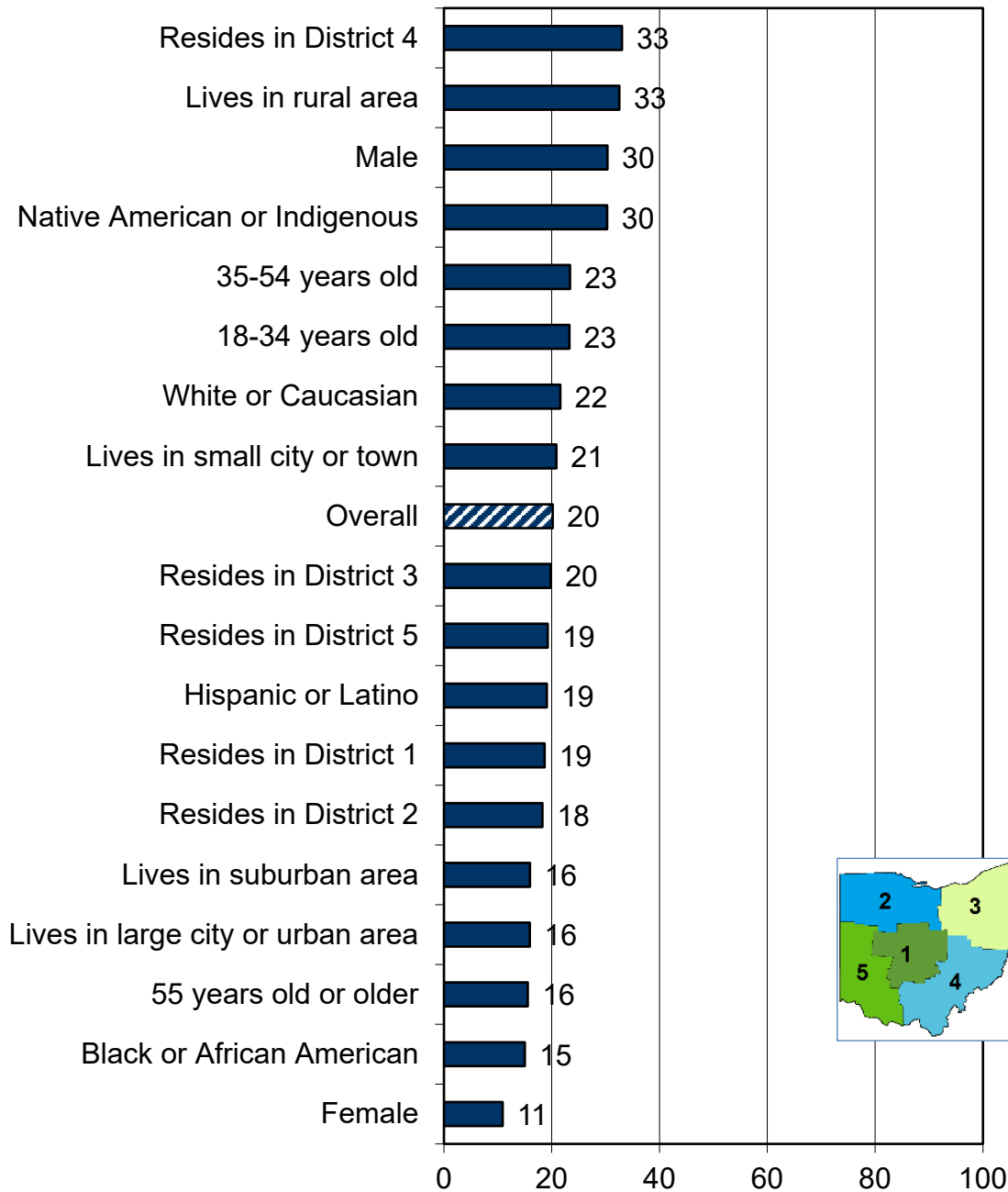
Percent of the following groups who participated in camping in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

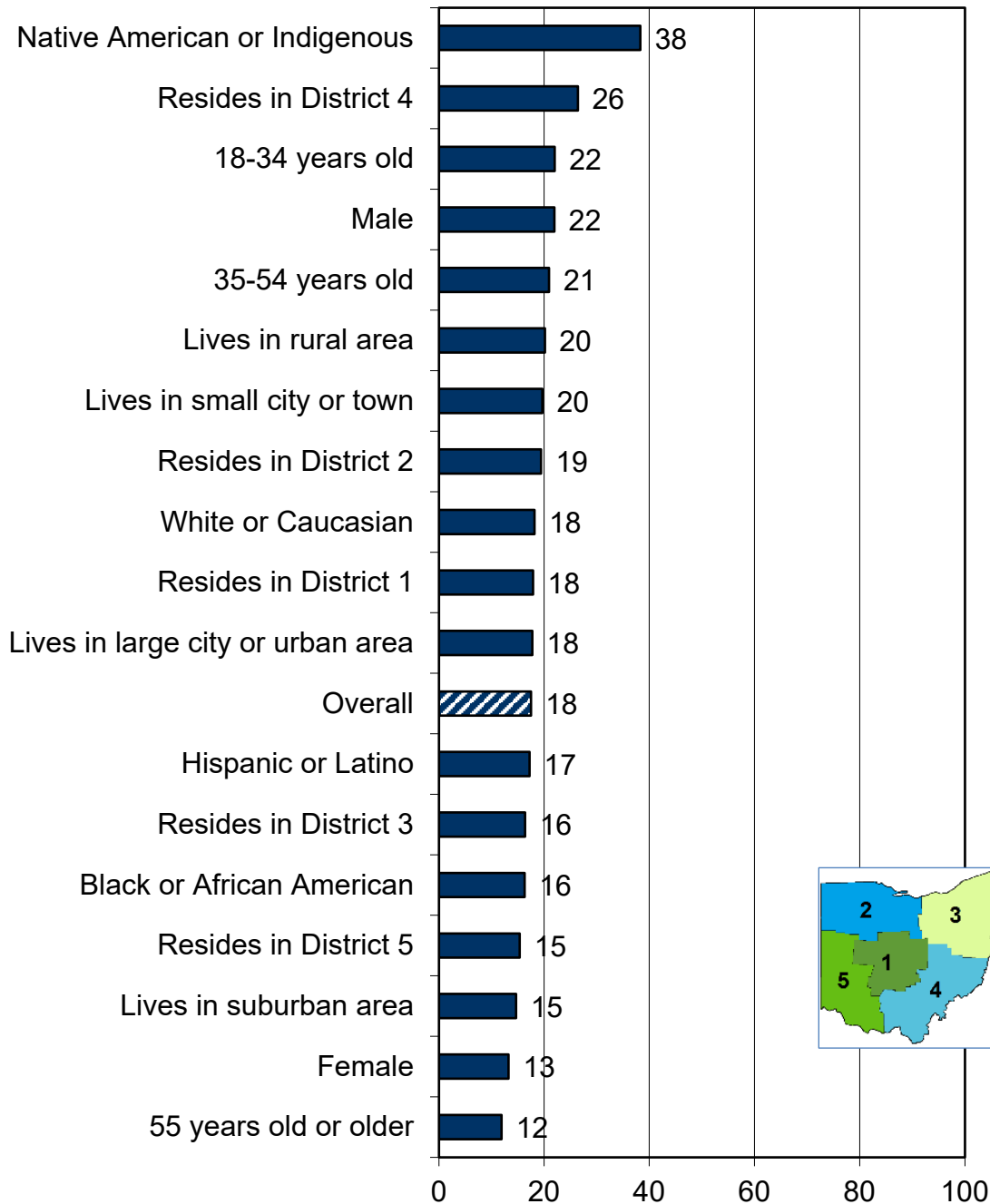
Percent of the following groups who participated in target or sport shooting in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

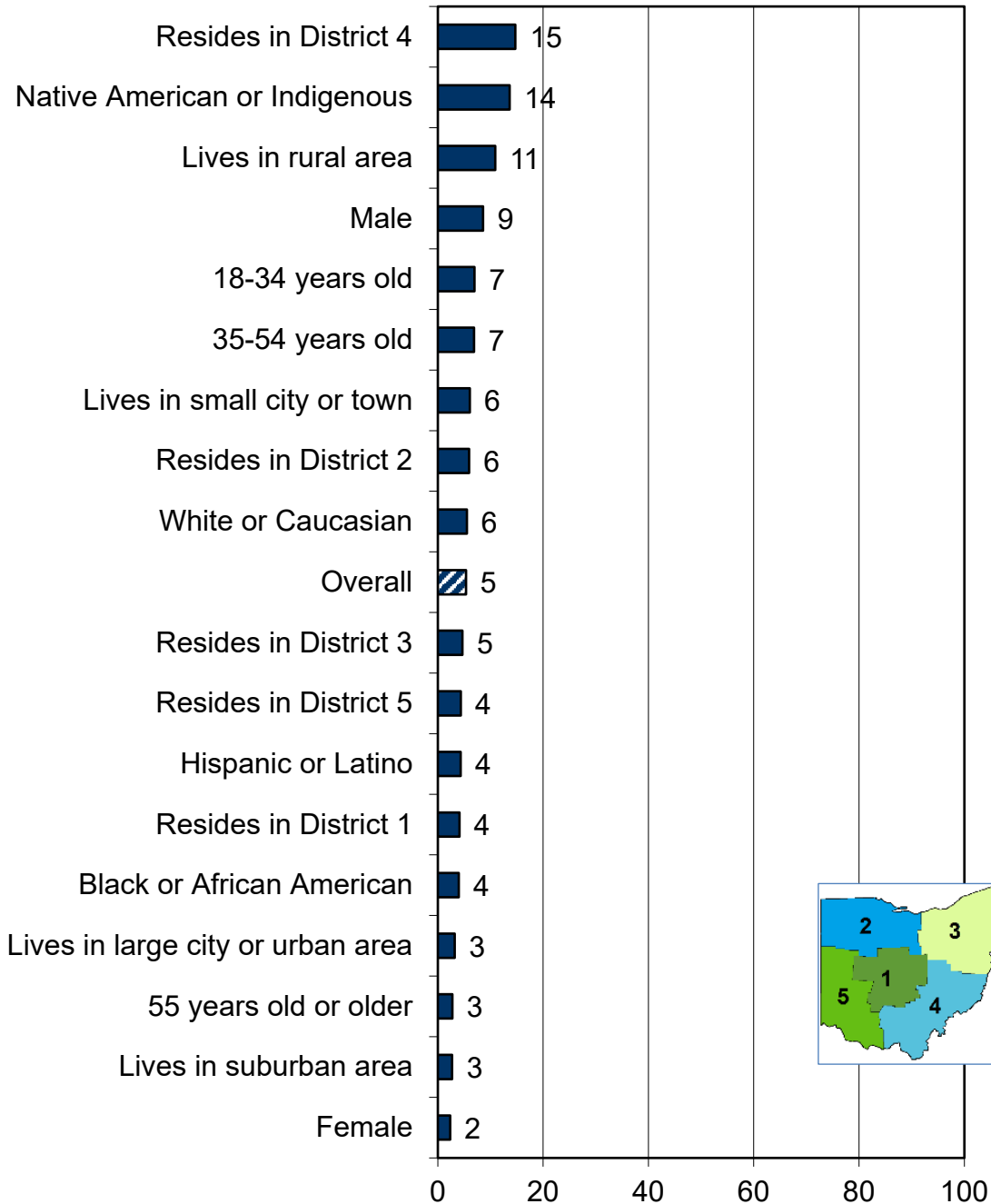
Percent of the following groups who participated in recreational fishing anywhere in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

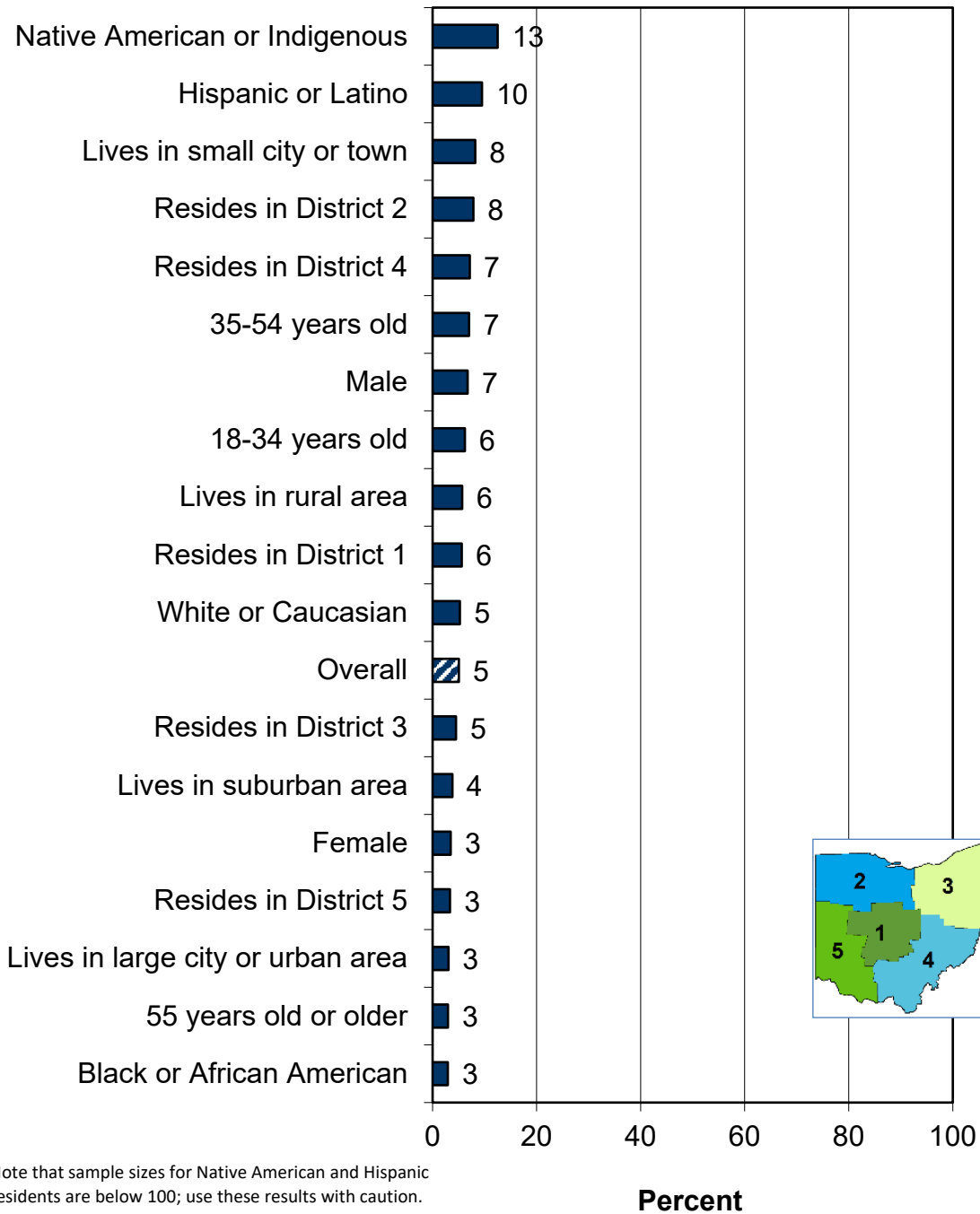
Percent of the following groups who participated in any hunting in Ohio in 2022. (General population)



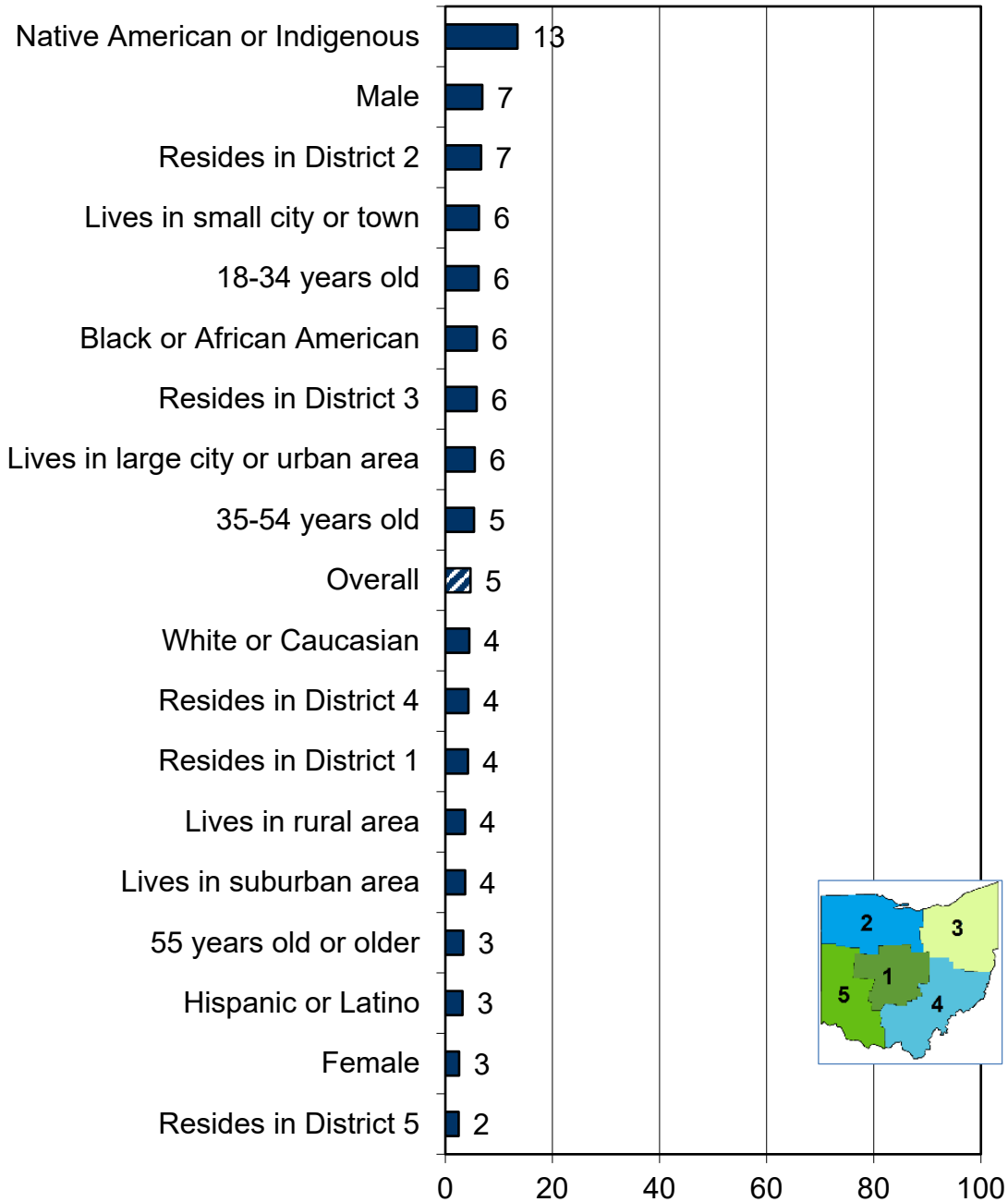
Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

Percent of the following groups who participated in archery activities (other than bowhunting) in Ohio in 2022. (General population)



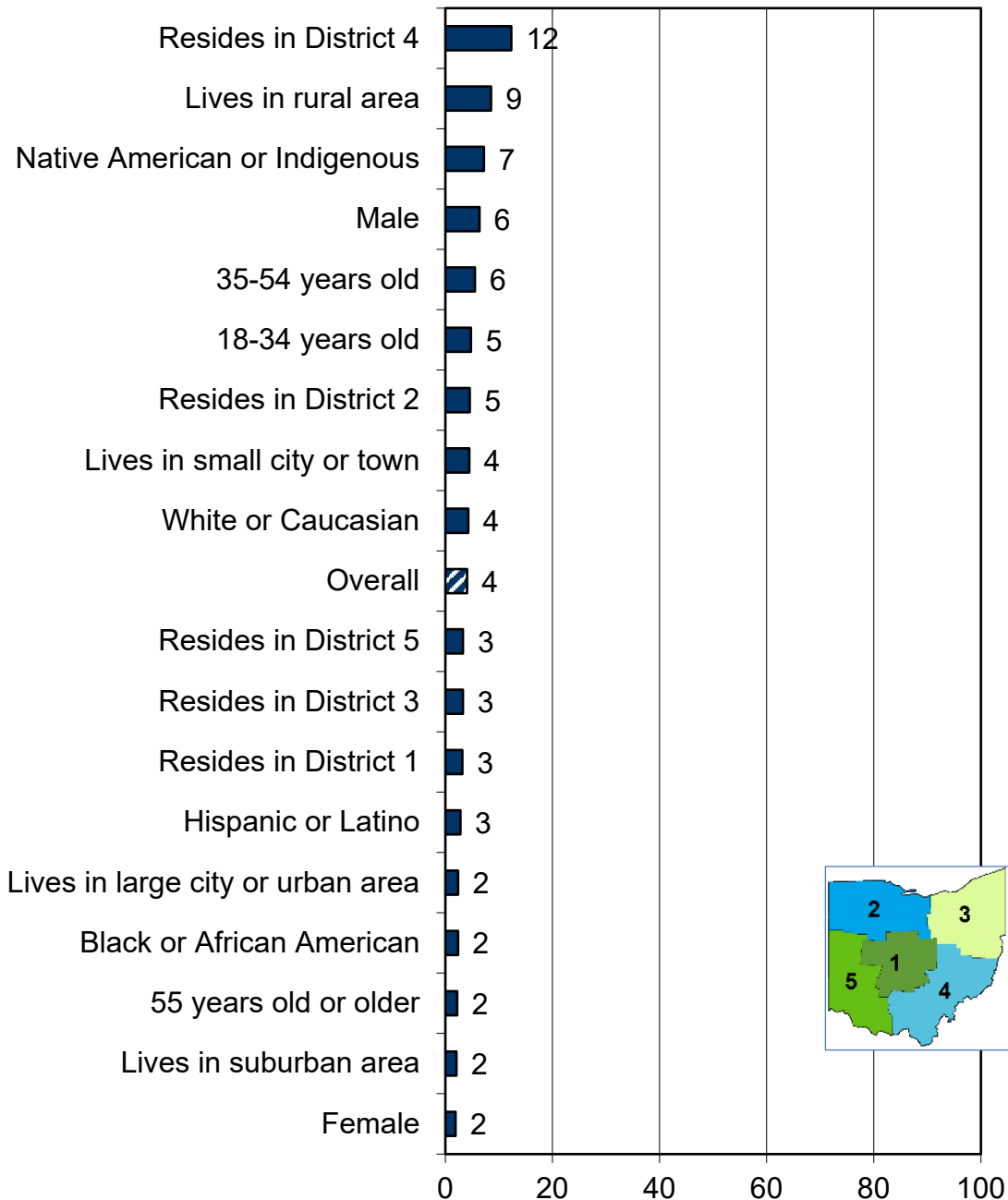
Percent of the following groups who participated in recreational fishing specifically on Lake Erie in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

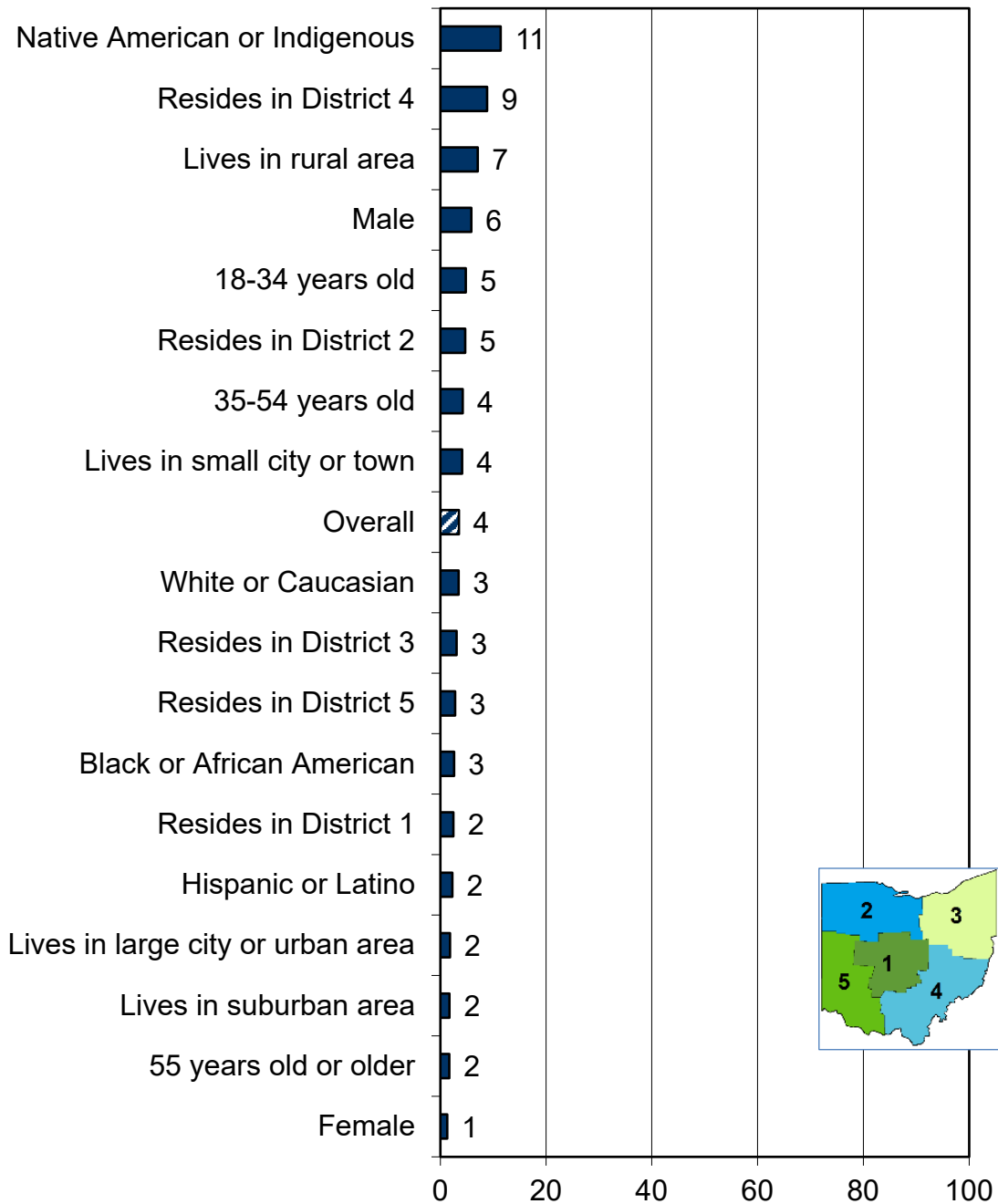
Percent of the following groups who participated in hunting with firearms in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

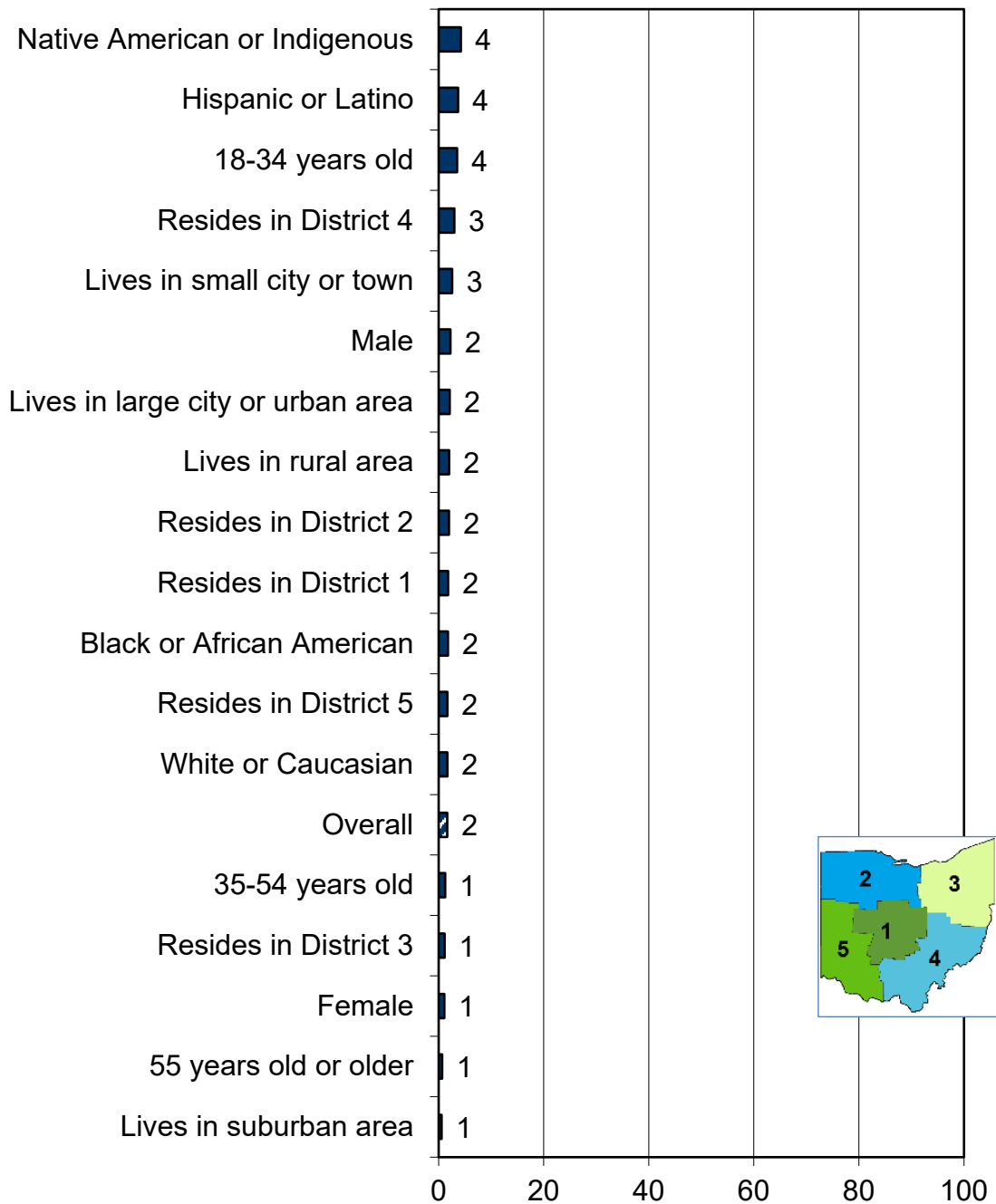
Percent of the following groups who participated in bowhunting in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

Percent

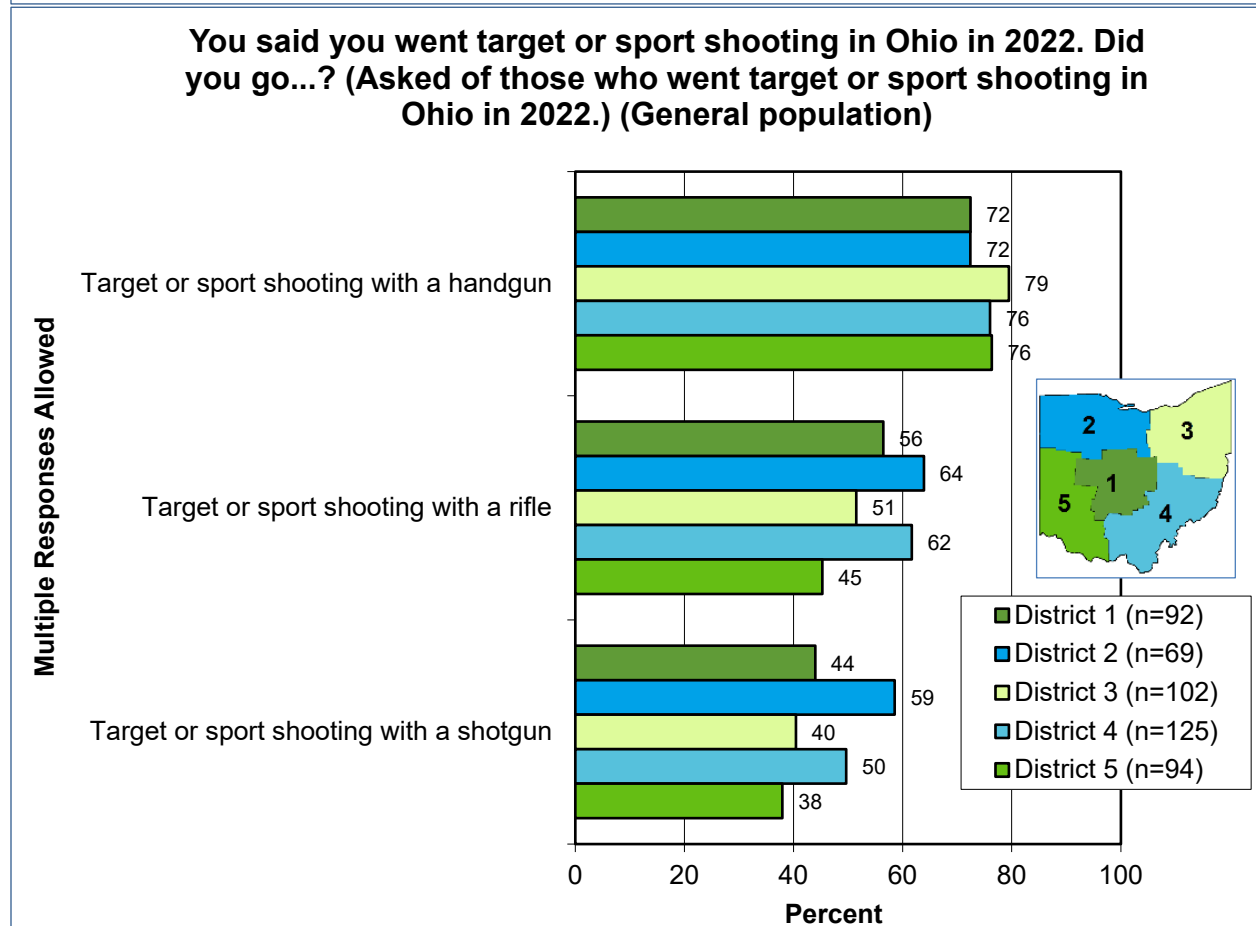
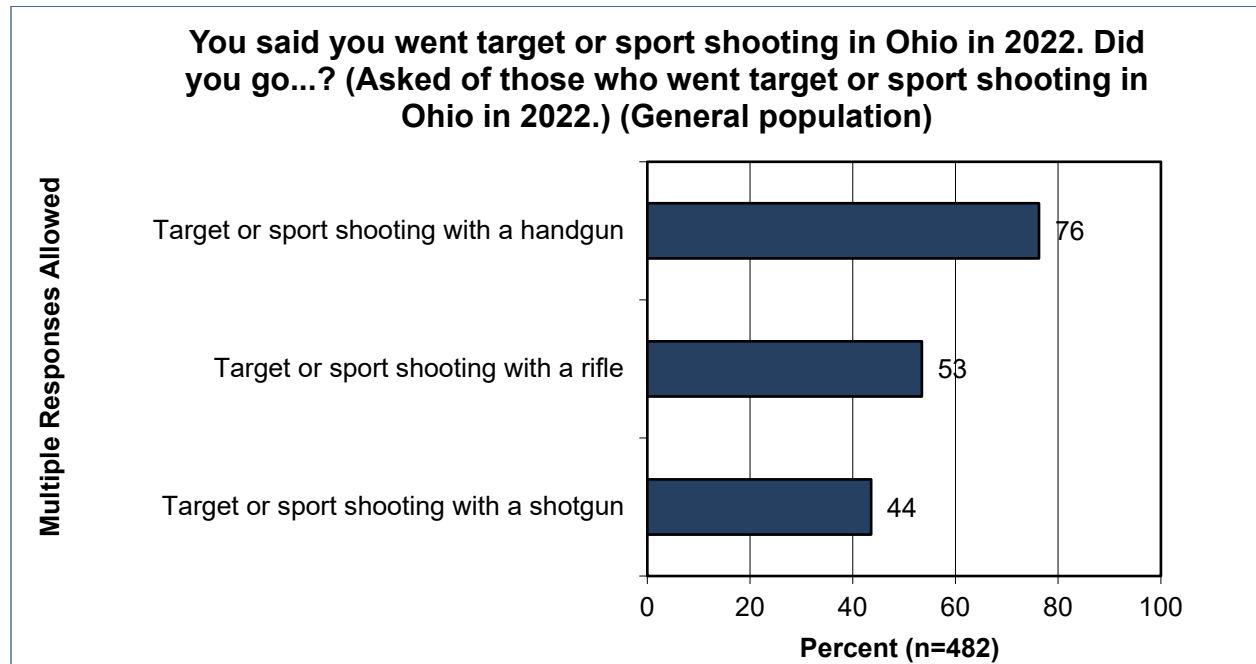
Percent of the following groups who participated in trapping in Ohio in 2022. (General population)



Note that sample sizes for Native American and Hispanic residents are below 100; use these results with caution.

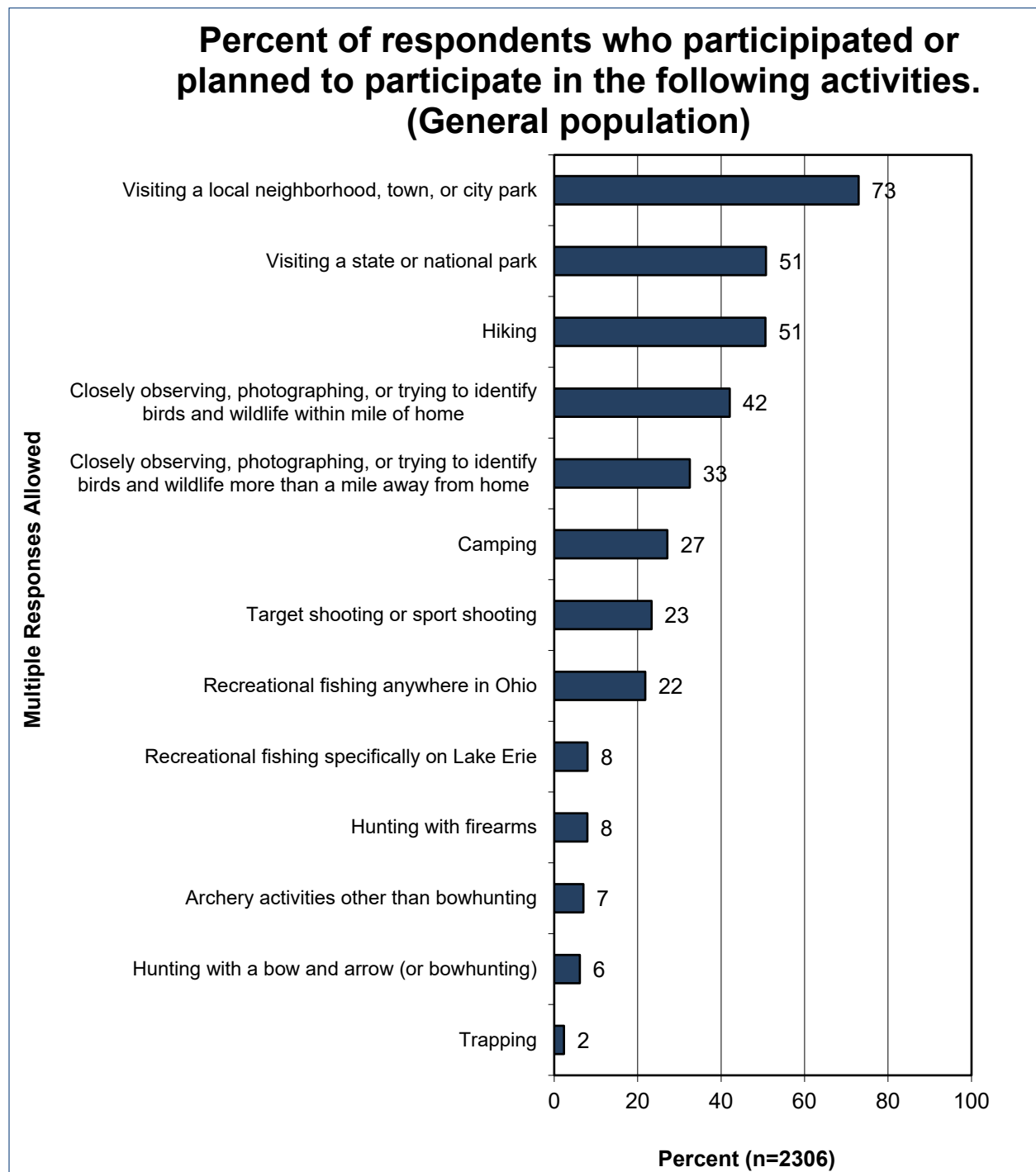
Percent

Among residents who went sport shooting in Ohio in 2022, 76% shot a handgun, 53% shot a rifle, and 44% shot a shotgun.



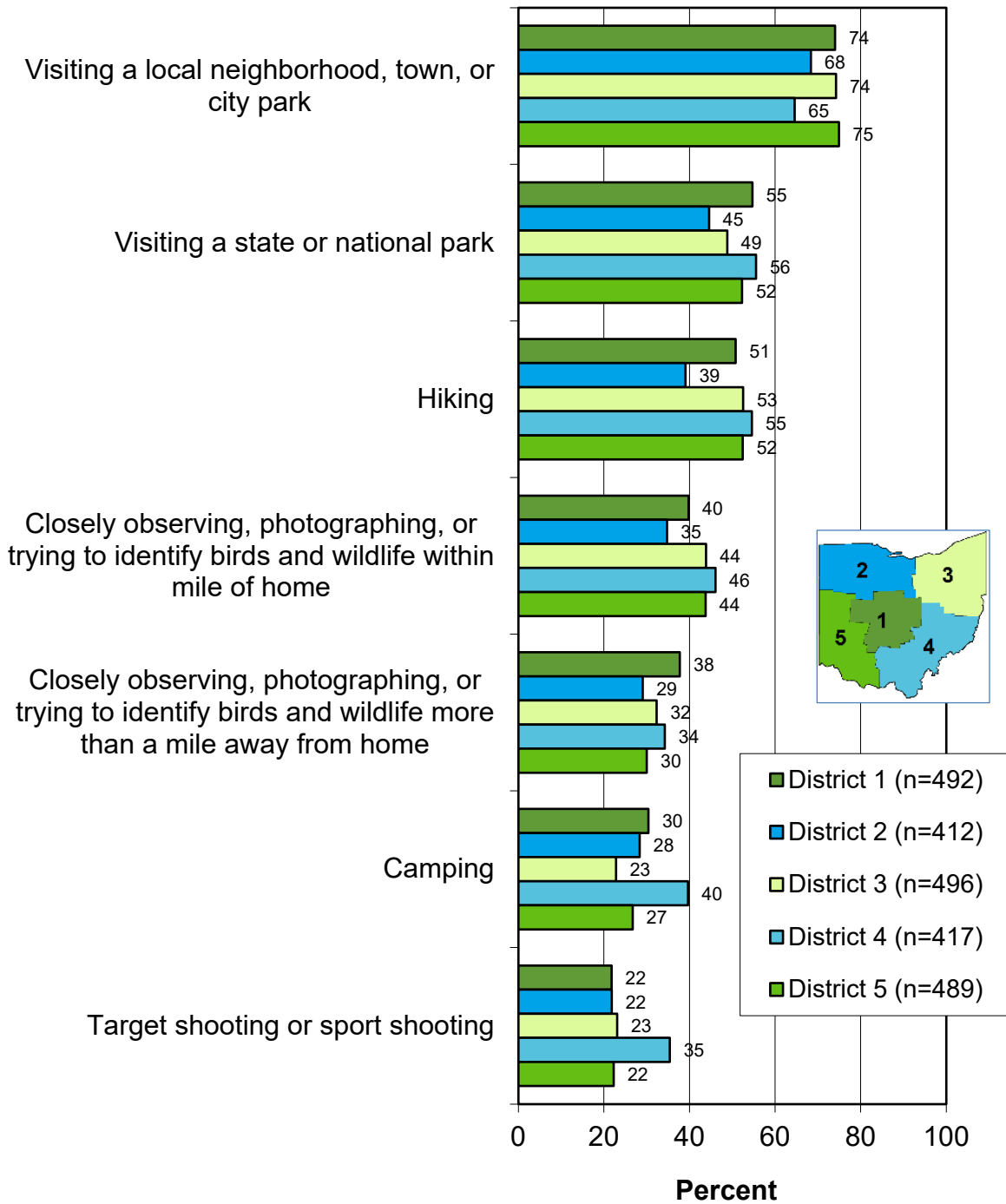
PLANNED PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES

Residents were presented with the same list of activities and were asked if they planned to participate in any during the remainder of 2022. Combining this with the previously shown data on the activities that they had already done gives a rough idea of the rates of participation at year's end, although note that not all who planned to participate would end up doing so by the end of 2022, so these rates should be considered the maximum that they might be. The most common activities are visiting parks and hiking.

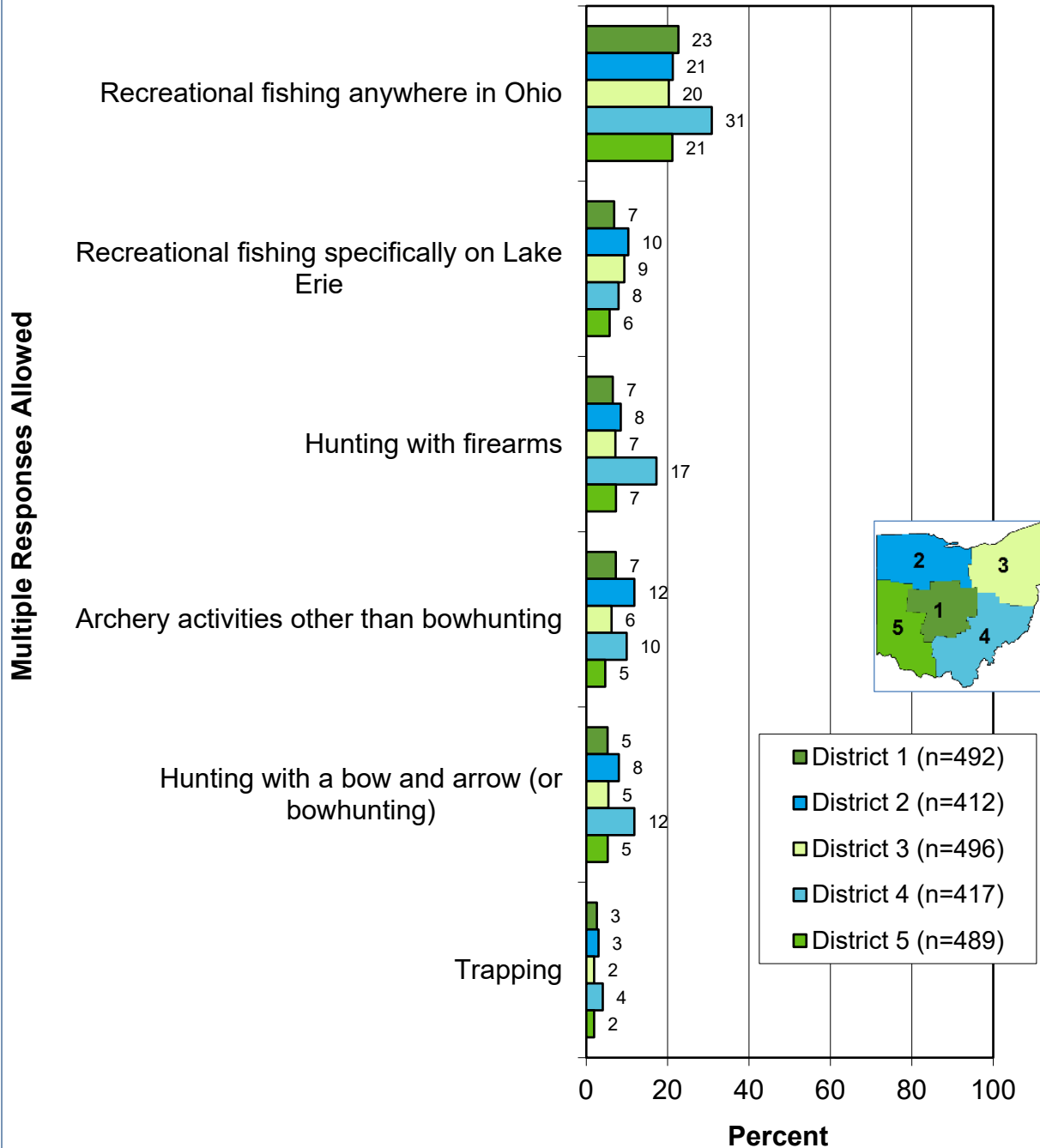


Percent of respondents who participated or planned to participate in the following activities. (General population) (Part 1)

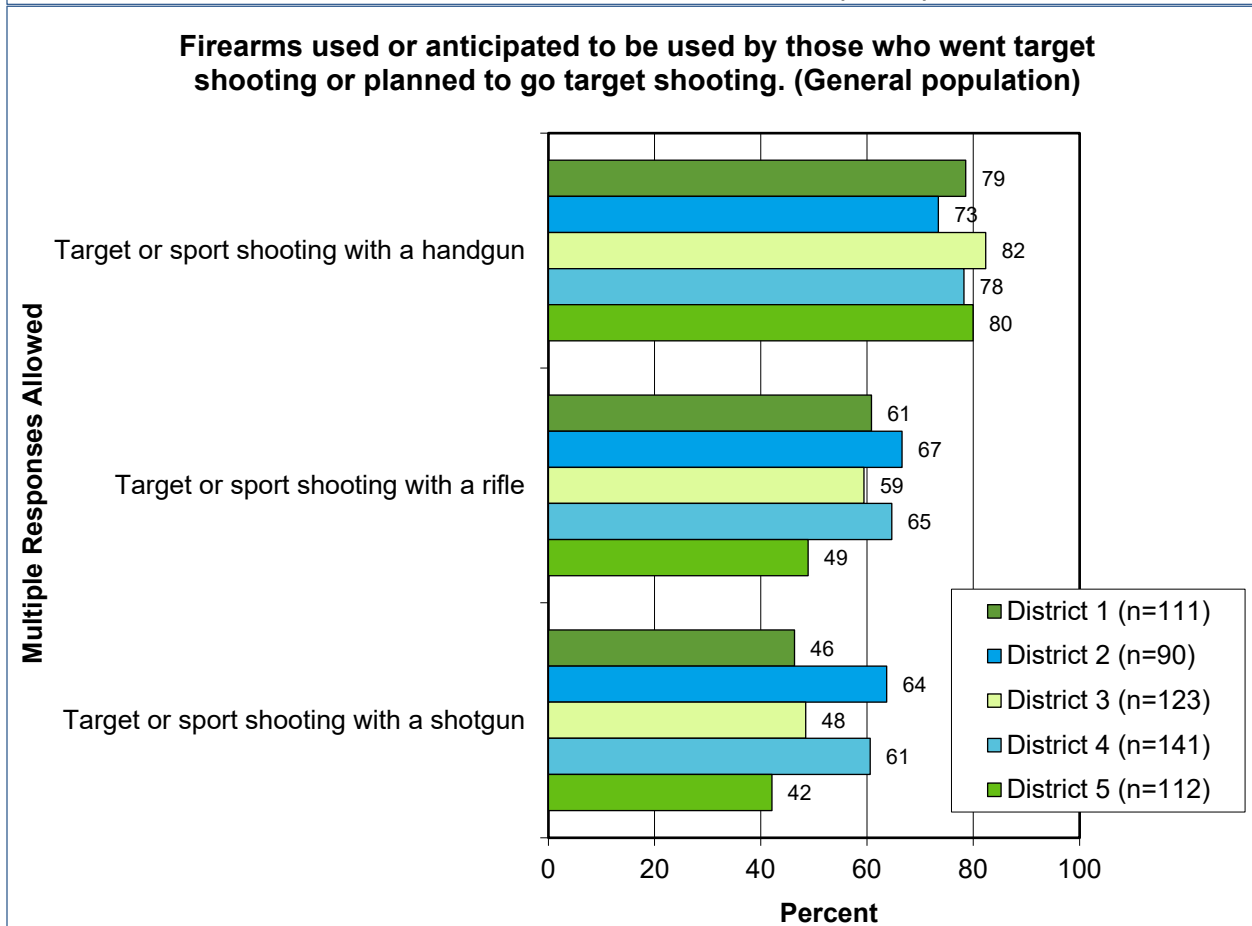
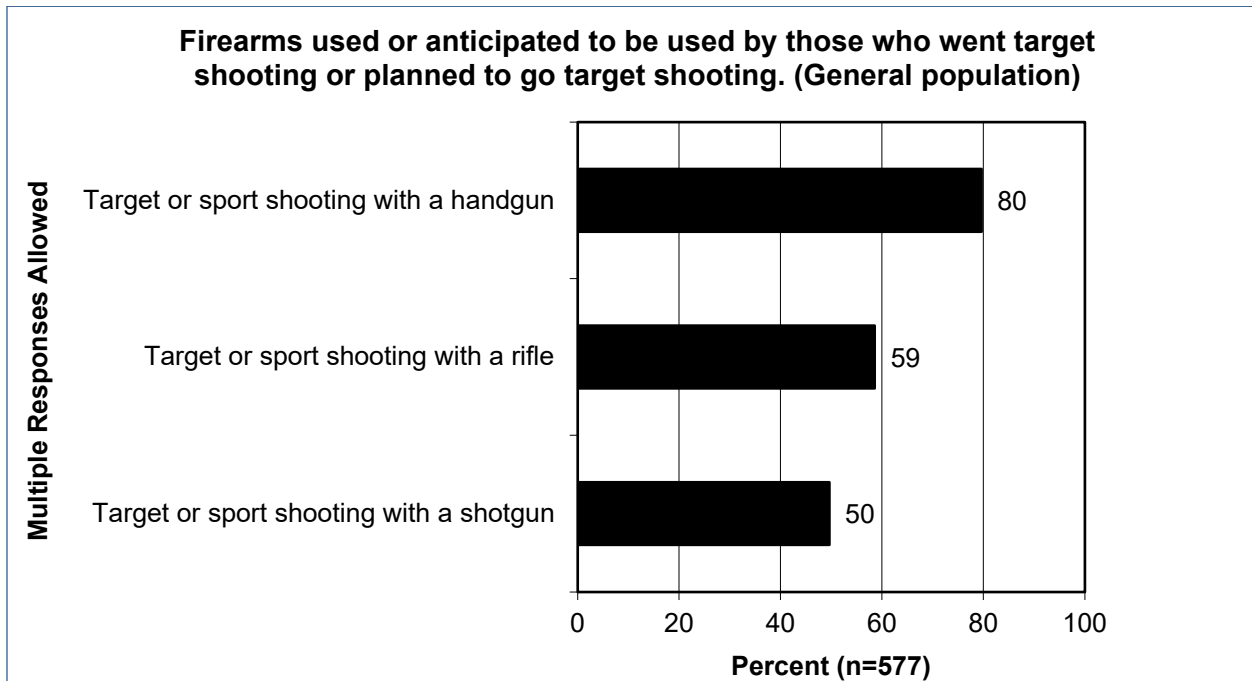
Multiple Responses Allowed



Percent of respondents who participated or planned to participate in the following activities. (General population) (Part 2)

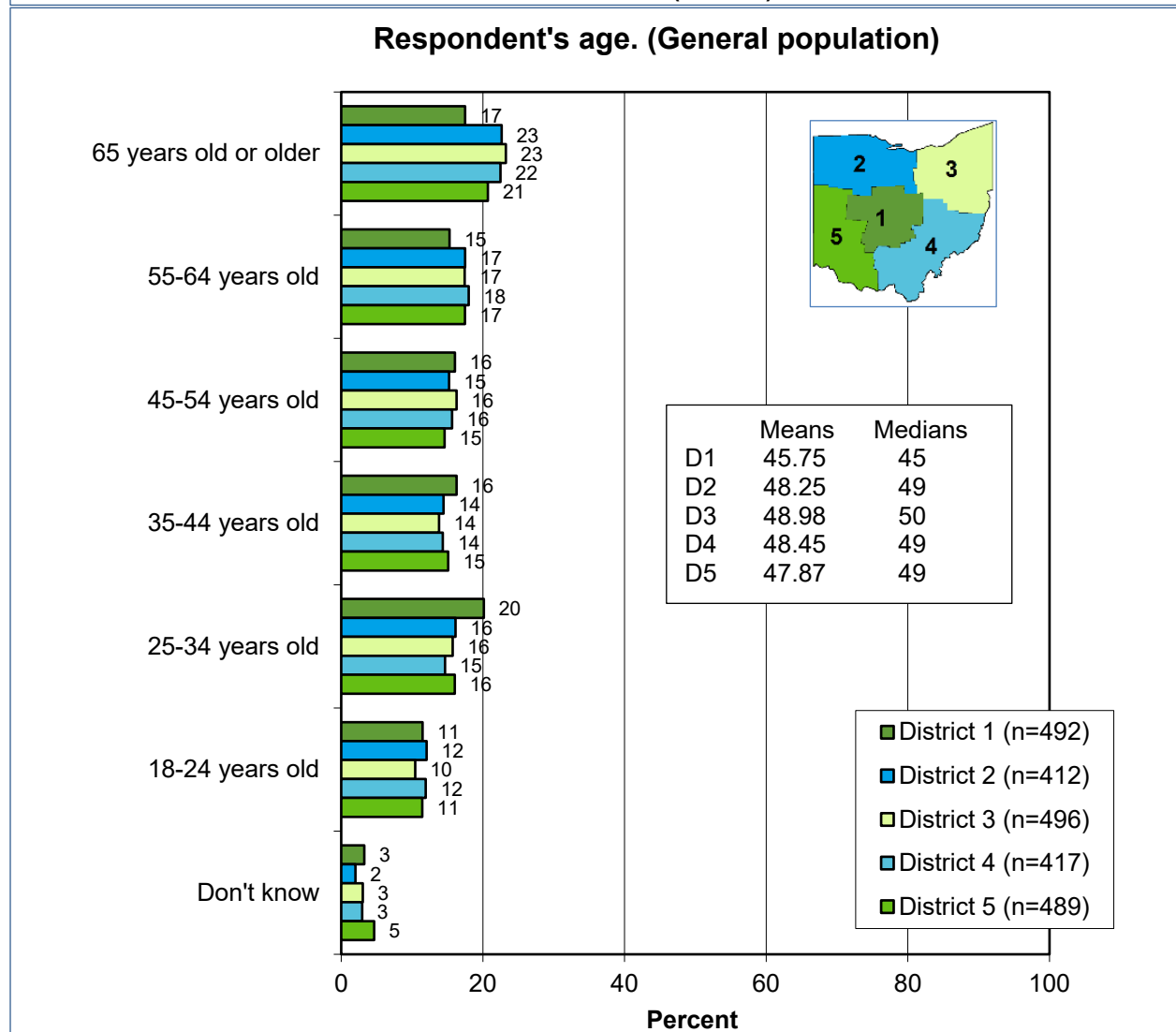
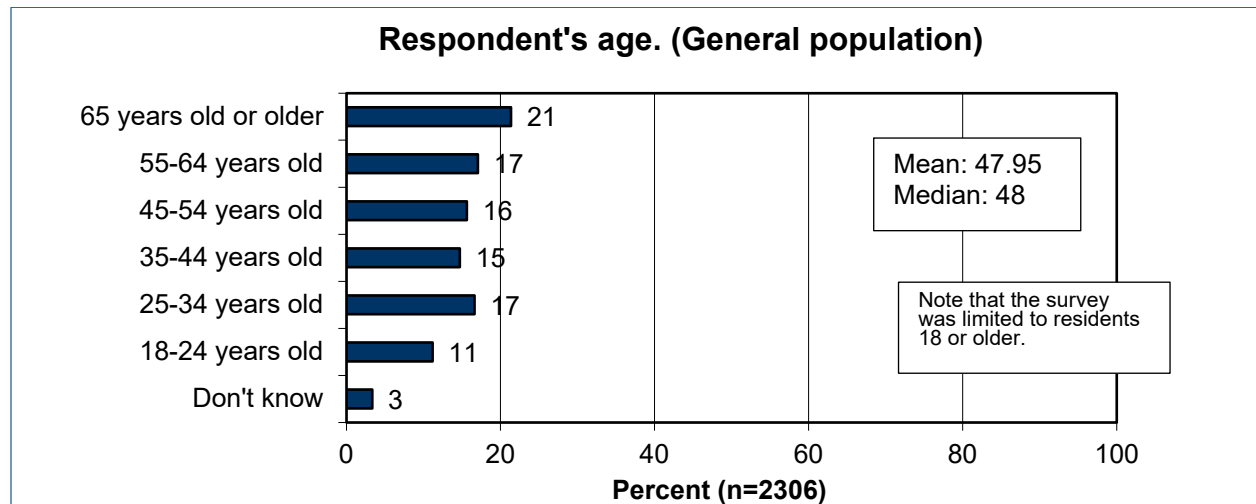


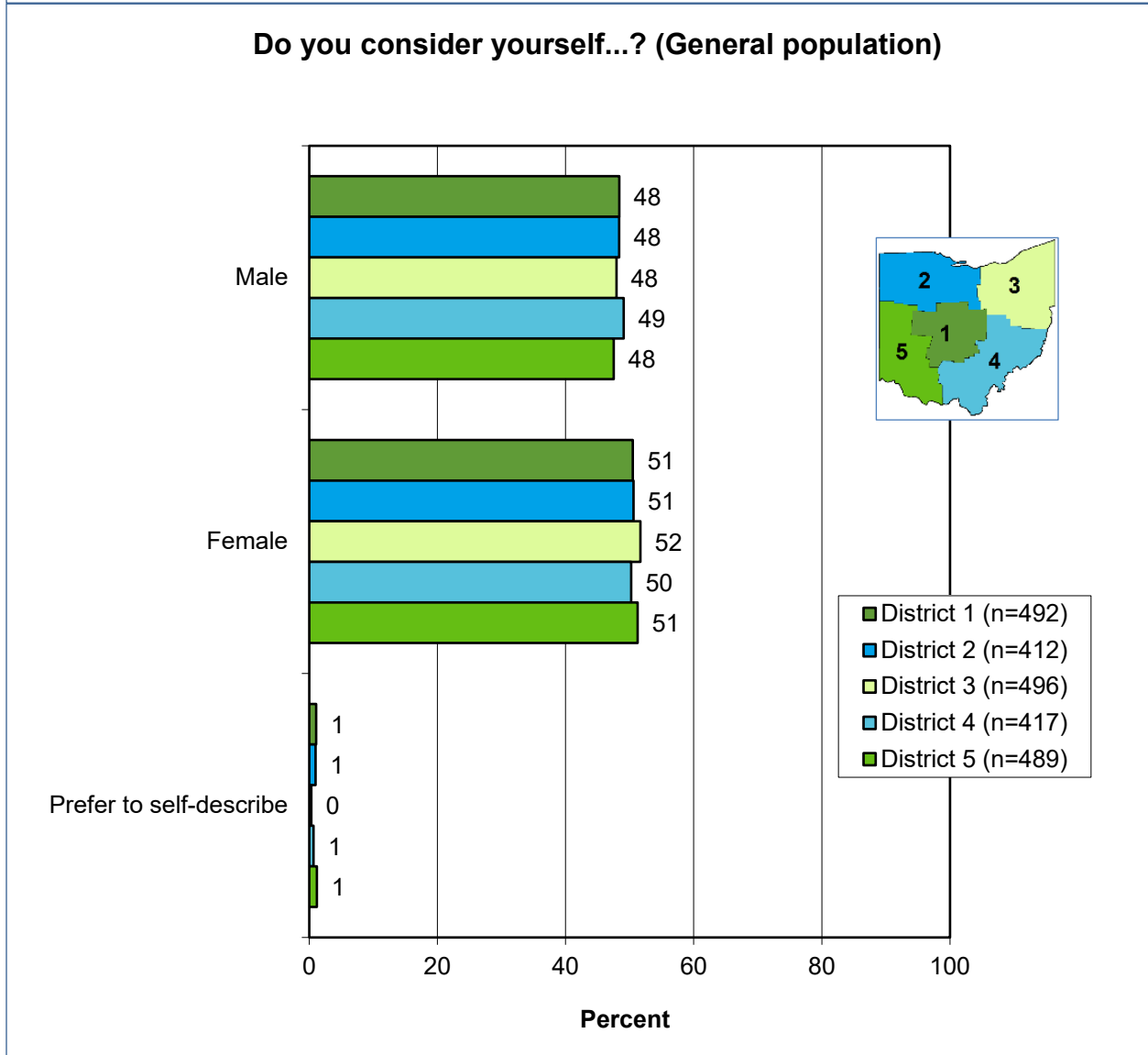
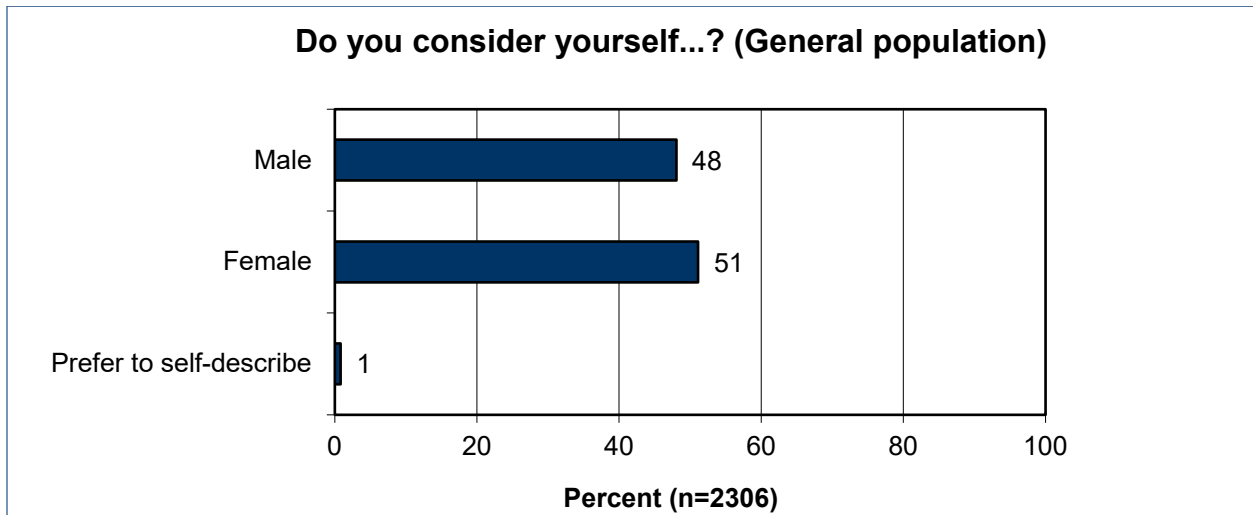
Types of firearms shot or that Ohio residents planned to shoot are shown in the accompanying graphs. Handgun shooting leads the way, followed by rifle shooting and shotgun shooting.



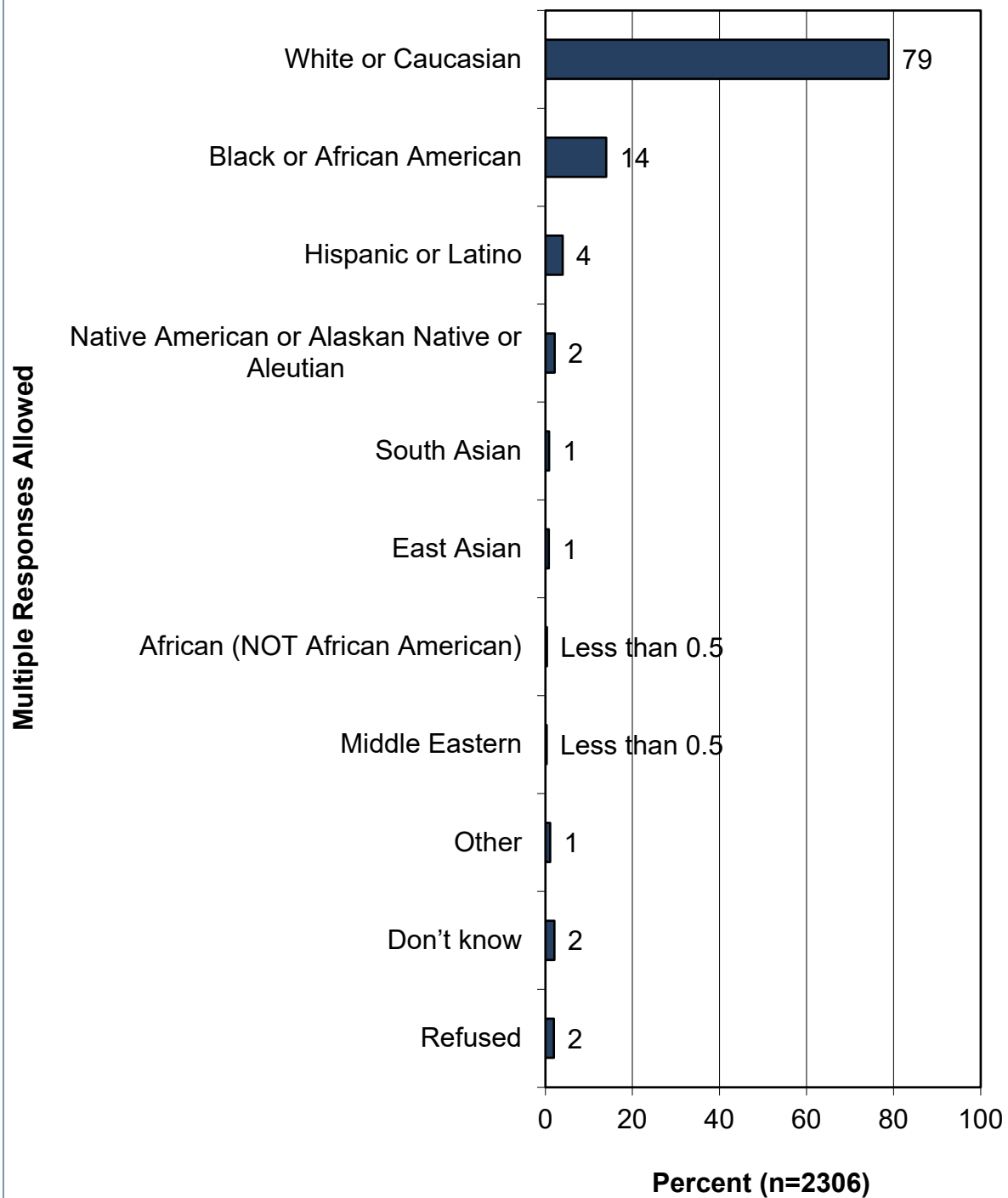
DEMOGRAPHIC CHARACTERISTICS

The survey collected the following demographic characteristics of respondents: age, gender, race/ethnicity, type of residential area (urban-rural continuum), and county of residence.

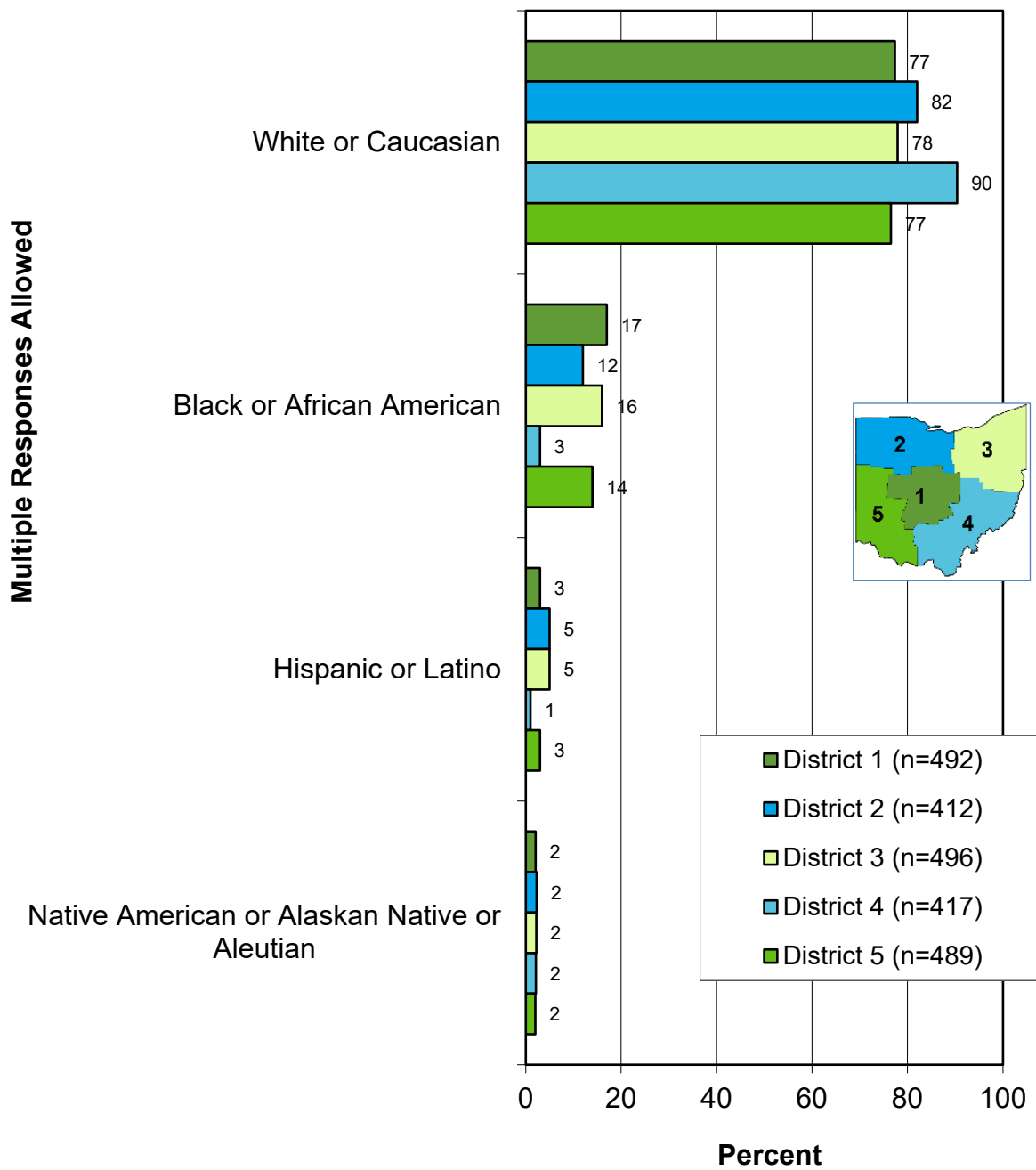




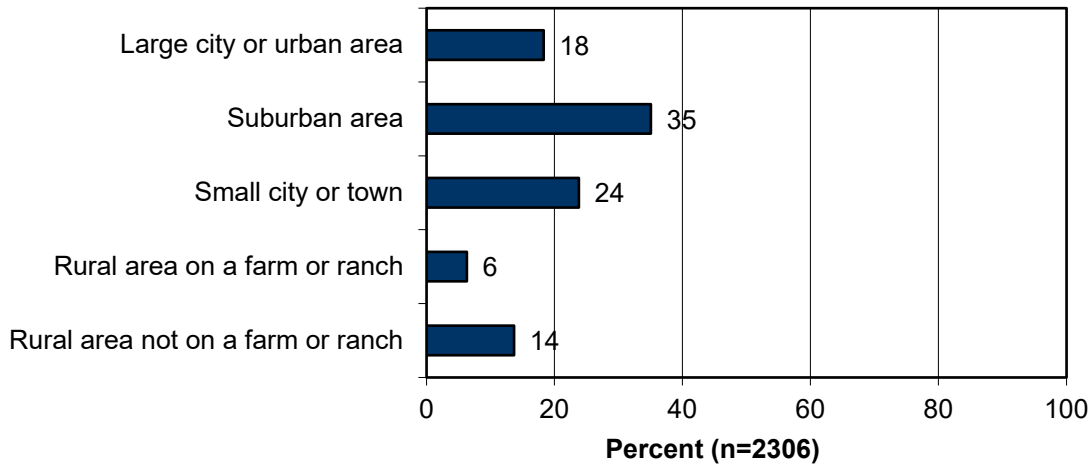
What races or ethnic backgrounds do you consider yourself? Please mention all that apply. (General population)



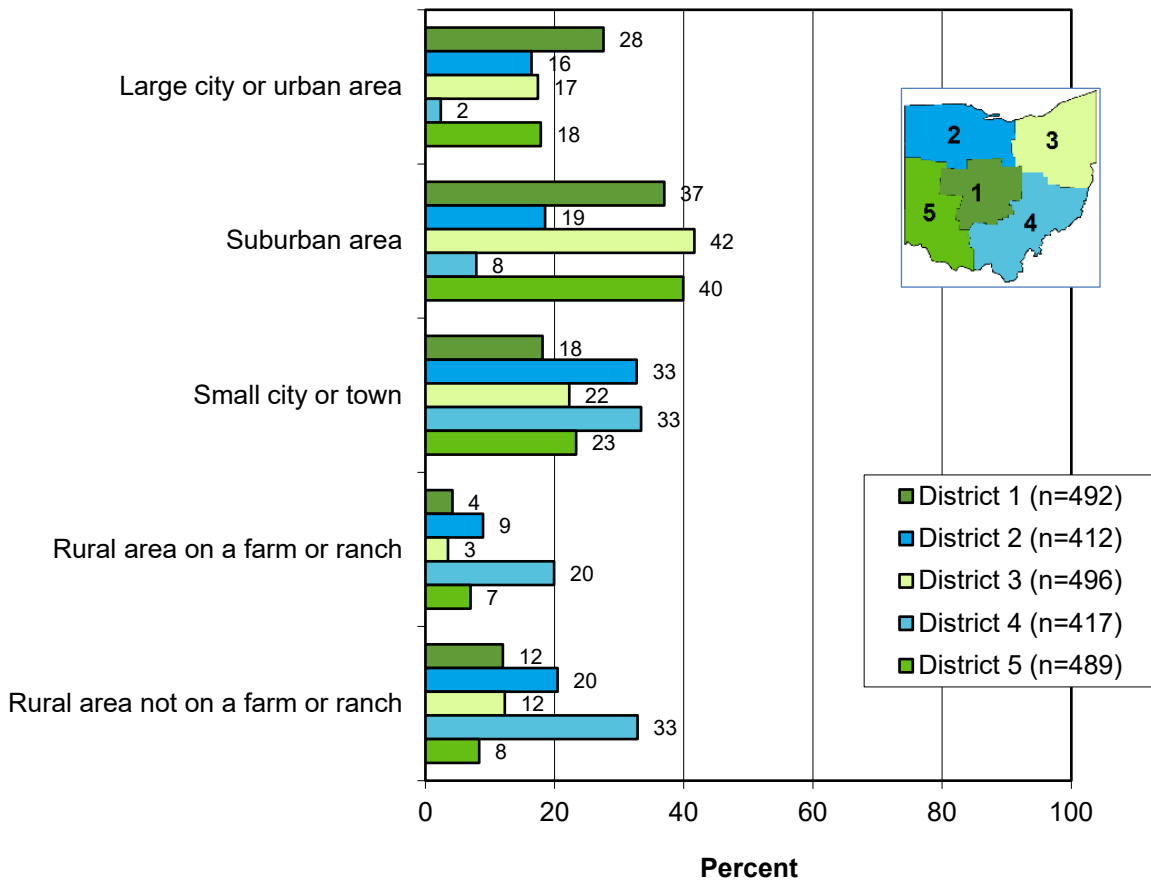
What races or ethnic backgrounds do you consider yourself? Please mention all that apply. (Top responses.) (General population)

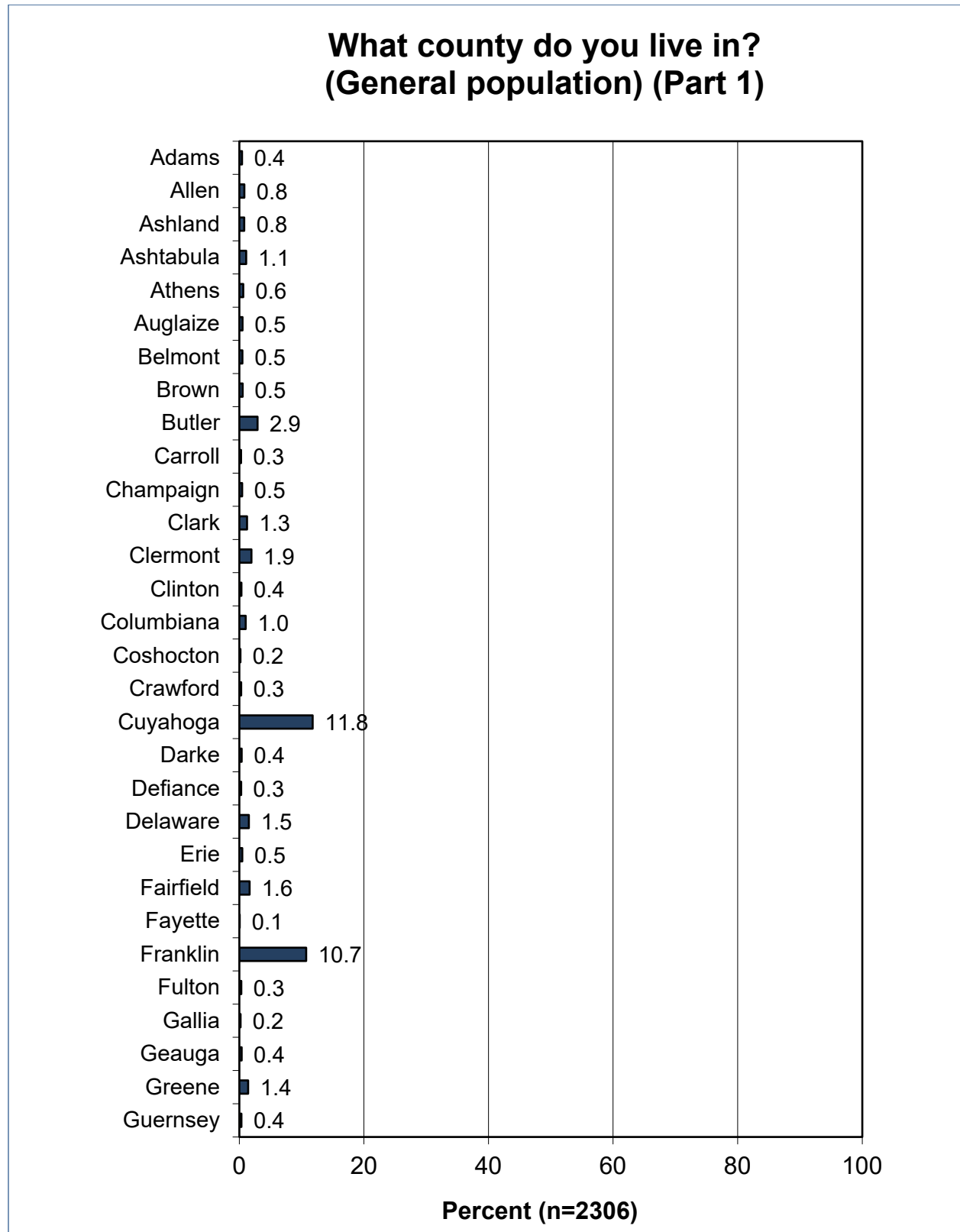


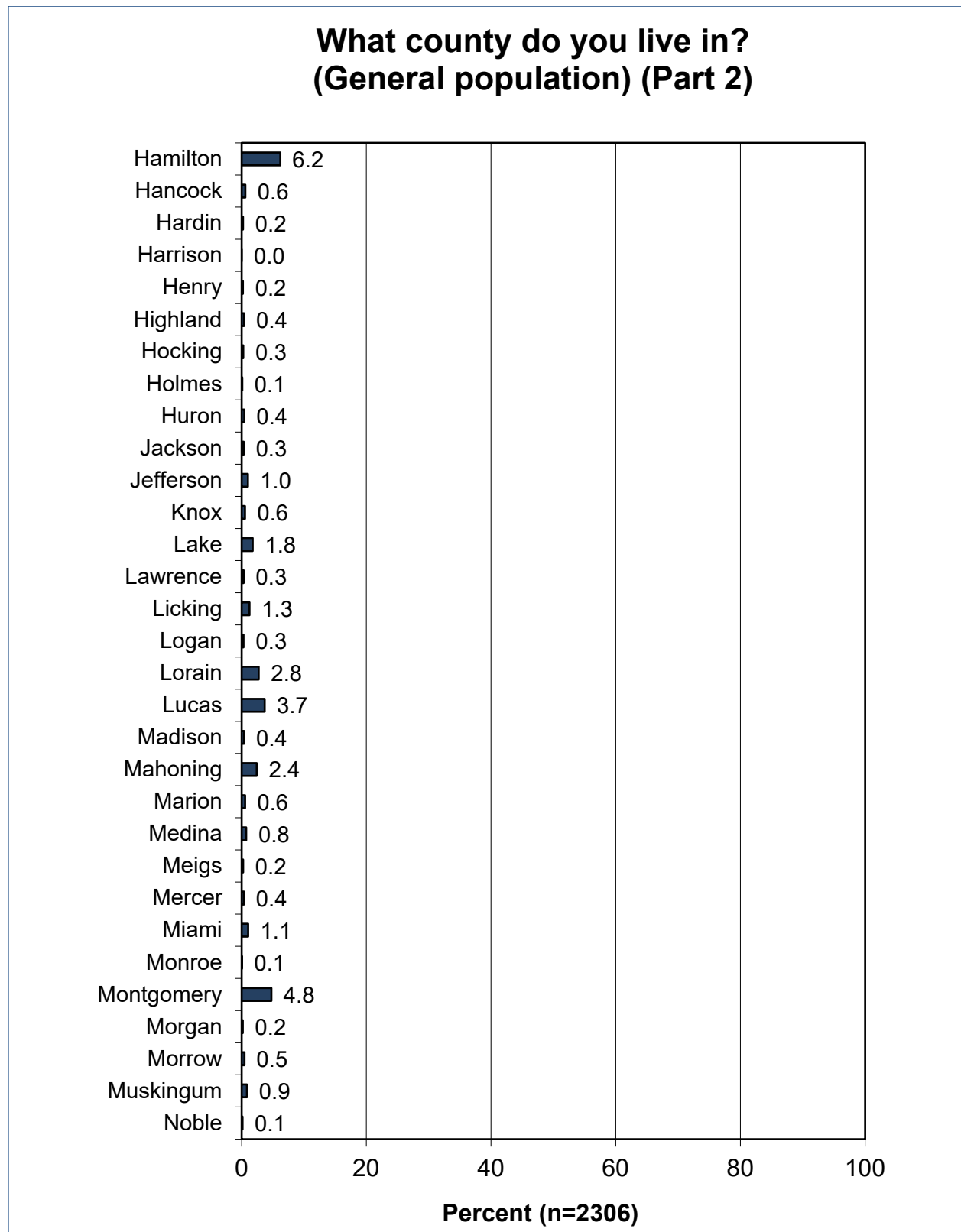
**Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?
(General population)**

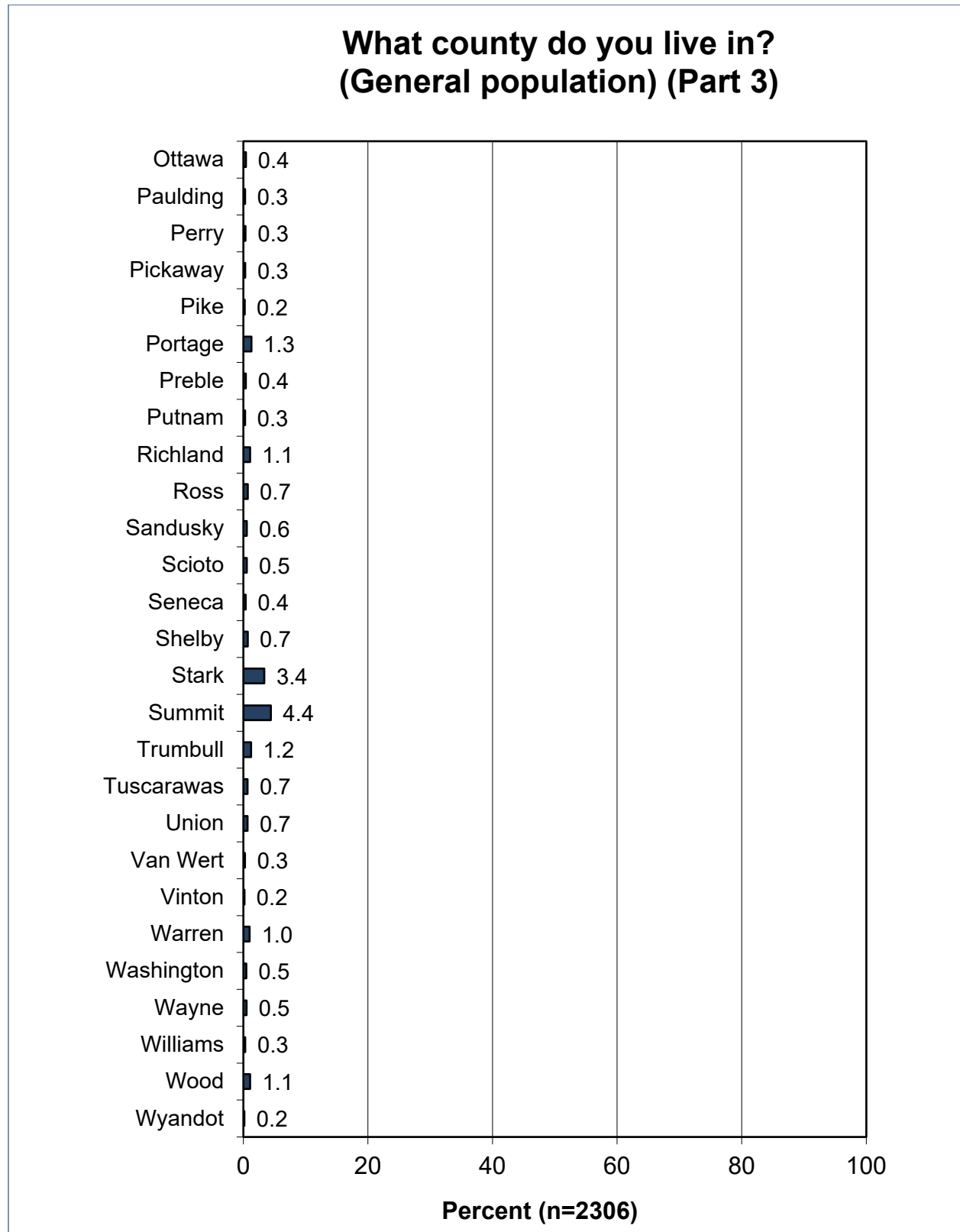


**Do you consider your place of residence to be a large city or urban area, a suburban area, a small city or town, a rural area on a farm or ranch, or a rural area not on a farm or ranch?
(General population)**







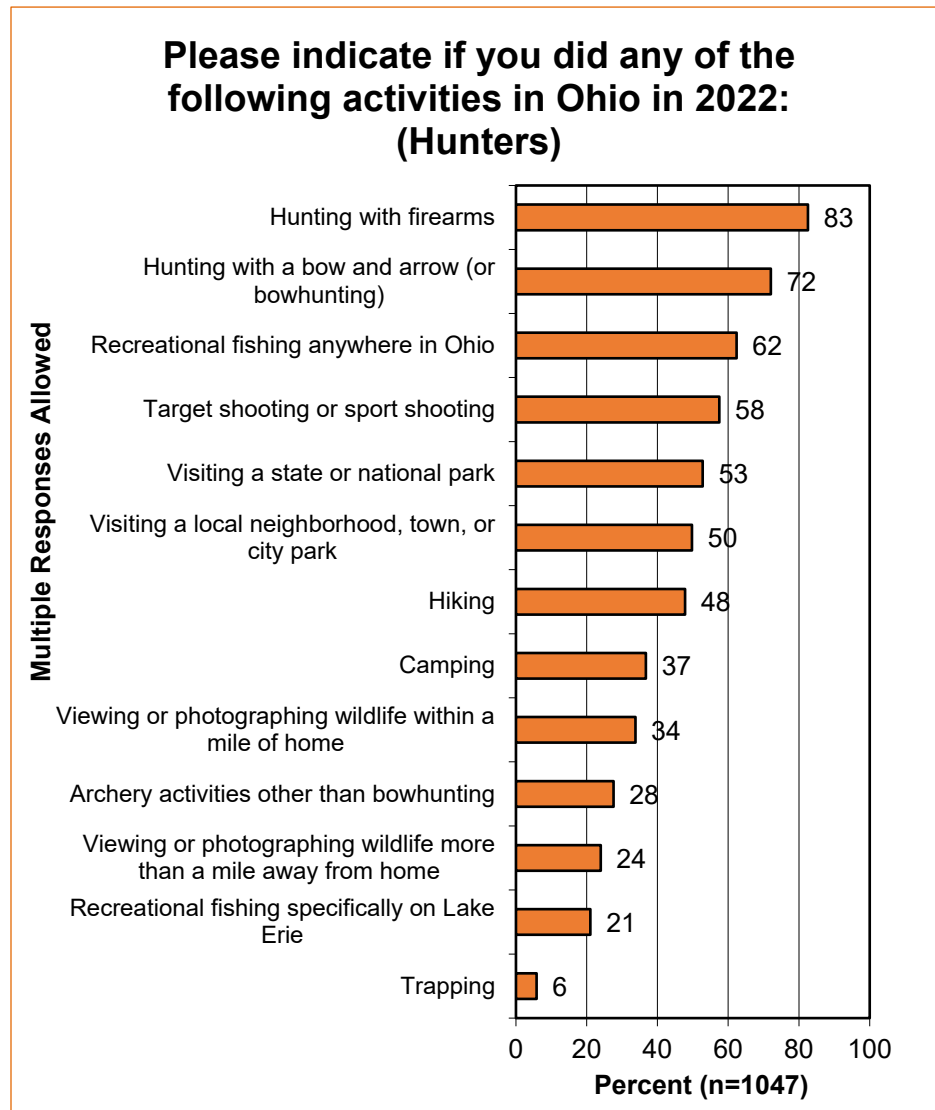


PARTICIPATION AND EXPENDITURE SURVEY OF HUNTERS

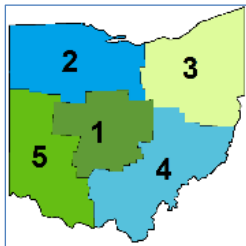
This section looks at hunters, consisting of those who went hunting in 2022 or who had spent money on hunting equipment. Participation in outdoor recreation in general by hunters is first examined before the report looks at hunting itself. The section discusses species hunted, equipment used, and hunting locations, as well as expenditures. The section ends with demographic analyses of hunters.

PARTICIPATION IN OUTDOOR RECREATION

Residents in the hunter sample were provided with a list of outdoor recreation activities, and they were asked if they participated in each in Ohio in 2022. Other than hunting (hunting with firearms and archery equipment were at the top), the most common activities were fishing anywhere in Ohio (62% did this), sport shooting (58%), visiting a state or national park (53%), visiting a local park (50% did this), and hiking (48%). The full list is shown, and a tabulation of District results is on the following page.

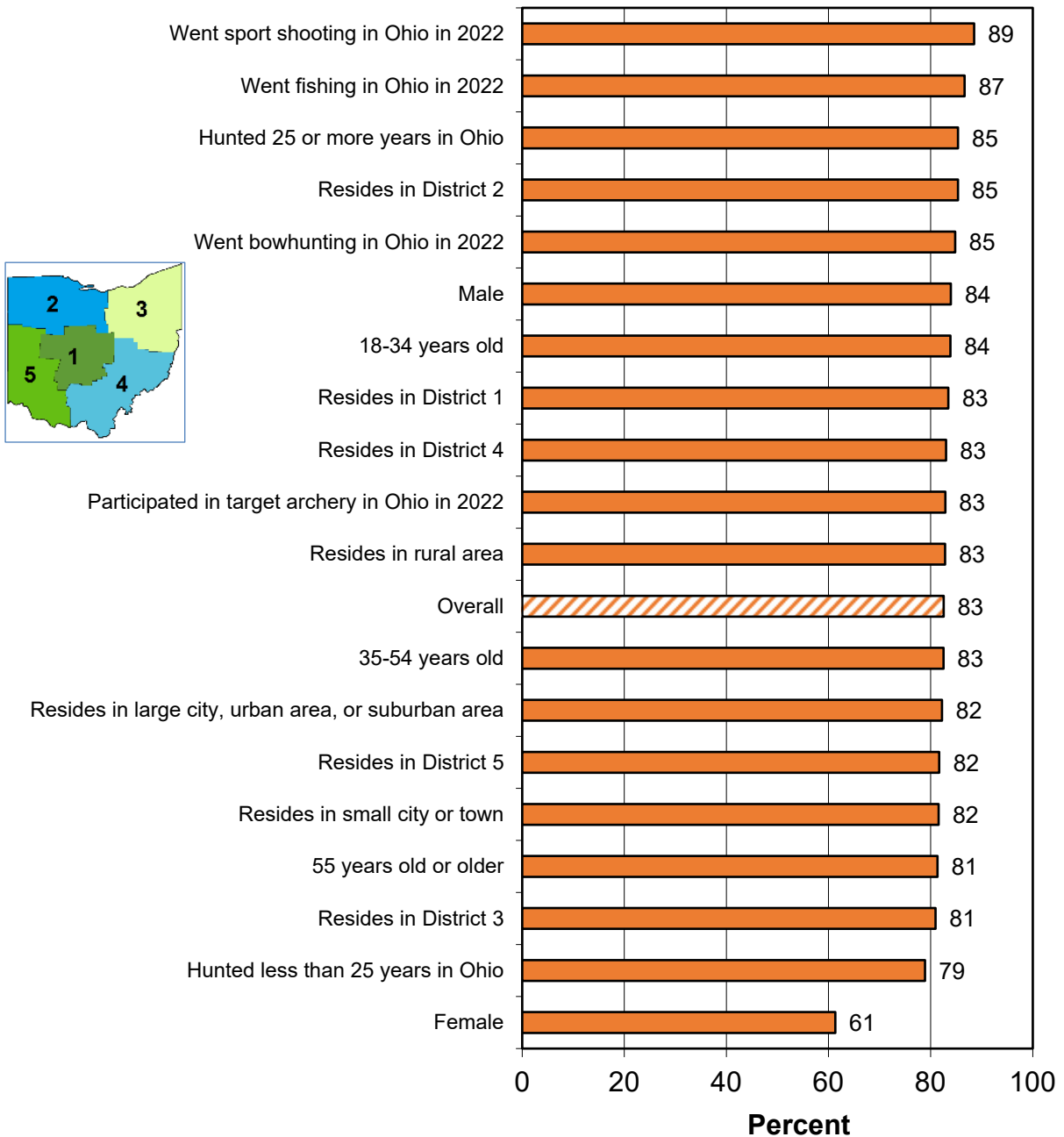


Please indicate if you did any of the following activities in Ohio in 2022. (Multiple Responses Allowed) (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Hunting with firearms	83	85	81	83	82
Hunting with a bow and arrow (or bowhunting)	73	74	74	64	72
Recreational fishing anywhere in Ohio	59	54	69	59	63
Target shooting or sport shooting	62	60	56	61	51
Visiting a state or national park	62	51	49	53	53
Visiting a local neighborhood, town, or city park	56	48	50	46	47
Hiking	57	37	48	44	53
Camping	39	36	32	35	46
Viewing or photographing wildlife within a mile of home	39	34	33	36	30
Archery activities other than bowhunting	33	25	29	22	27
Viewing or photographing wildlife more than a mile away from home	26	24	24	24	22
Recreational fishing specifically on Lake Erie	17	29	30	6	14
Trapping	5	8	6	7	4

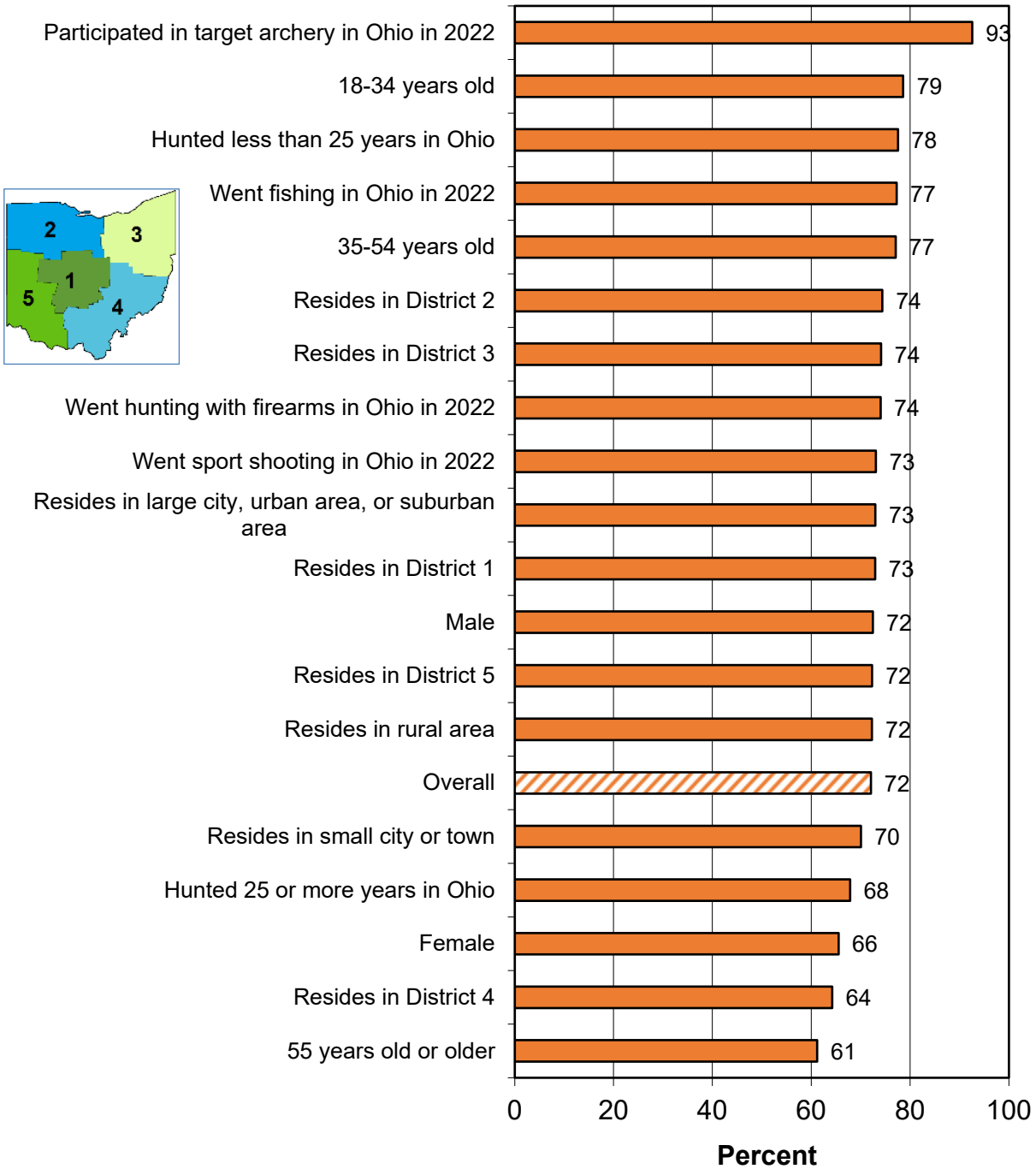


Demographic-participatory graphs are shown for those hunters who participated in hunting with firearms, bowhunting, fishing, sport shooting, and target archery.

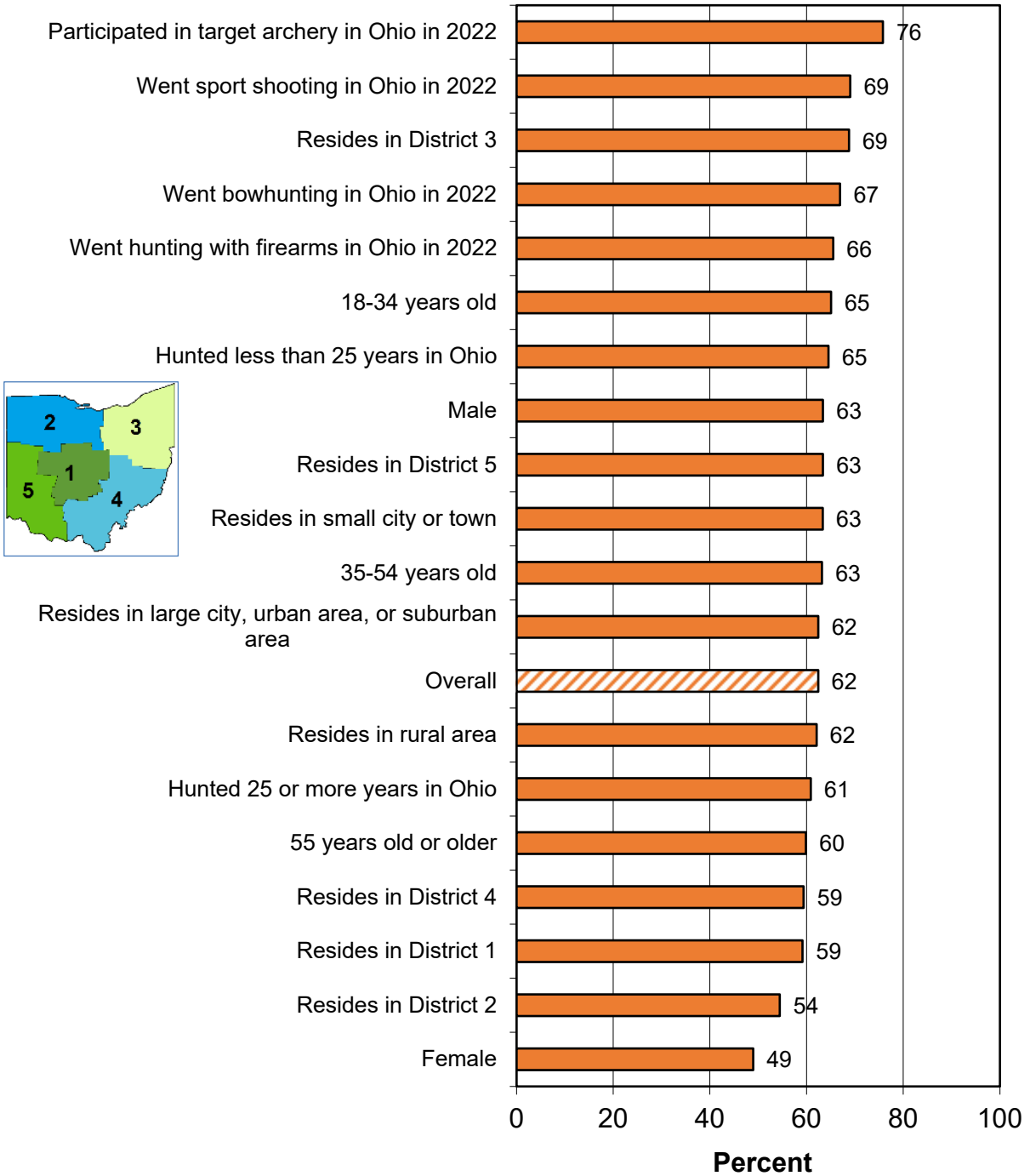
Percent of each of the following groups who went hunting with firearms in Ohio in 2022: (Hunters)



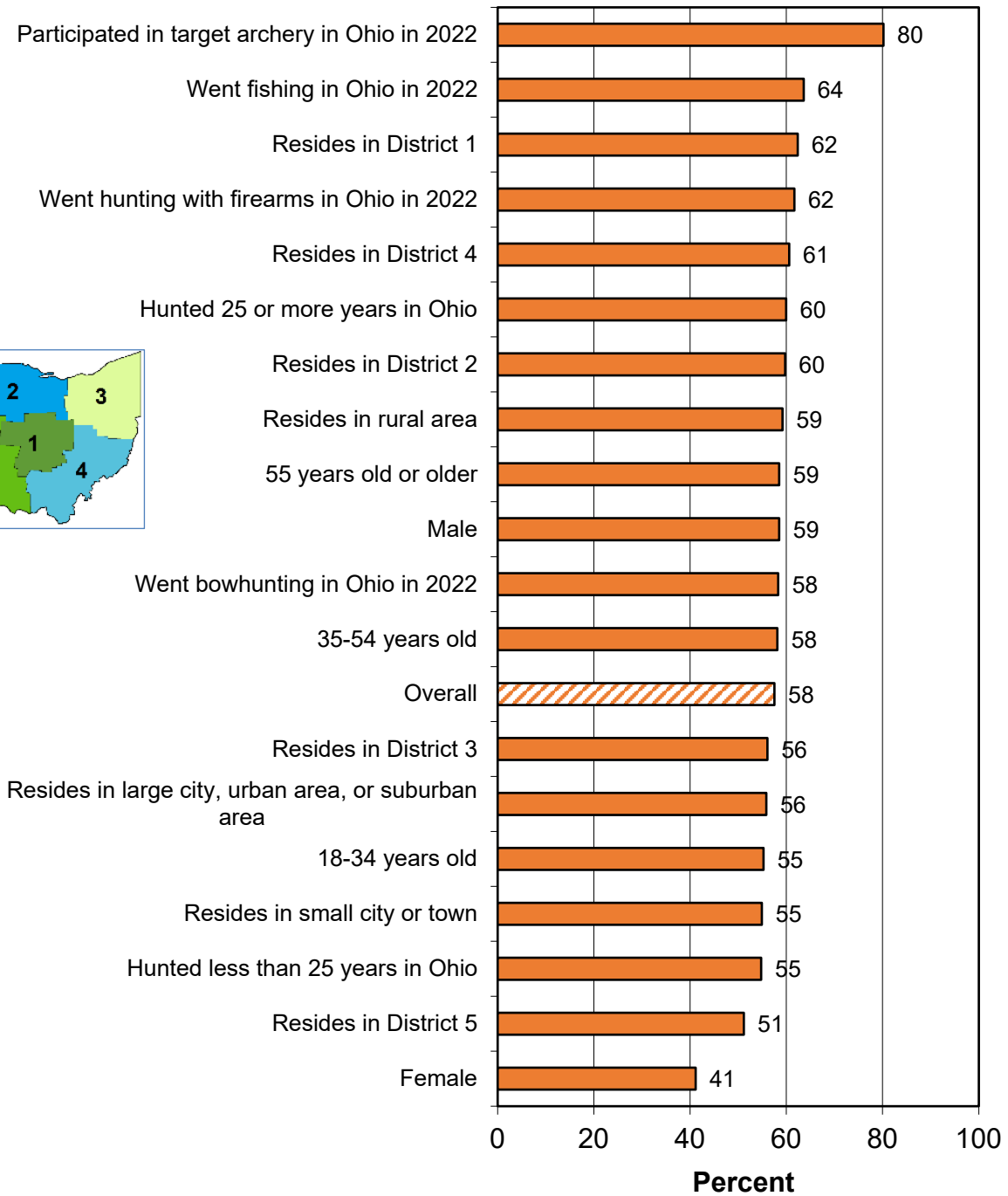
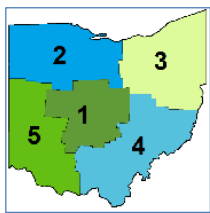
Percent of each of the following groups who went bowhunting in Ohio in 2022: (Hunters)



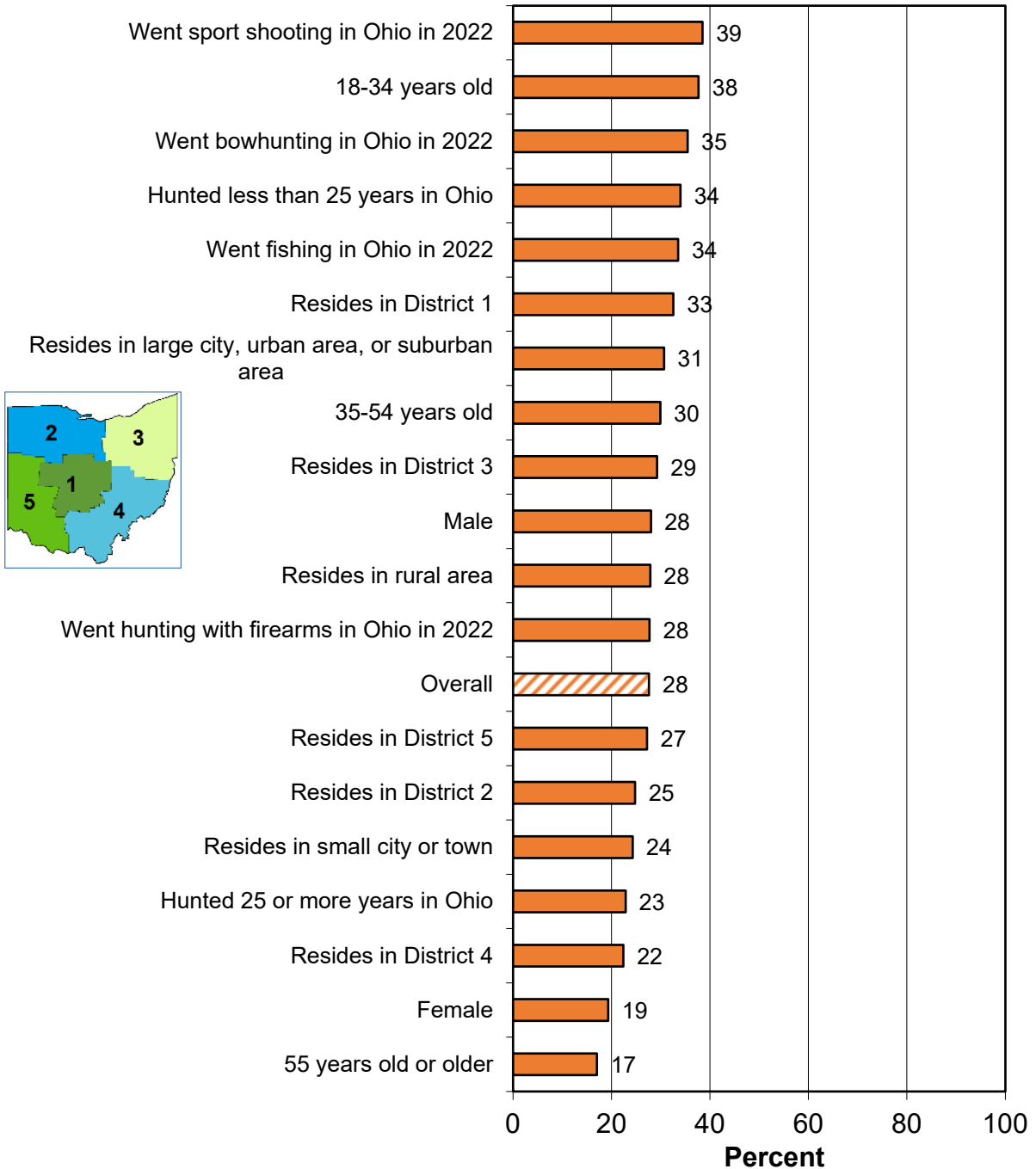
Percent of each of the following groups who went fishing in Ohio in 2022: (Hunters)



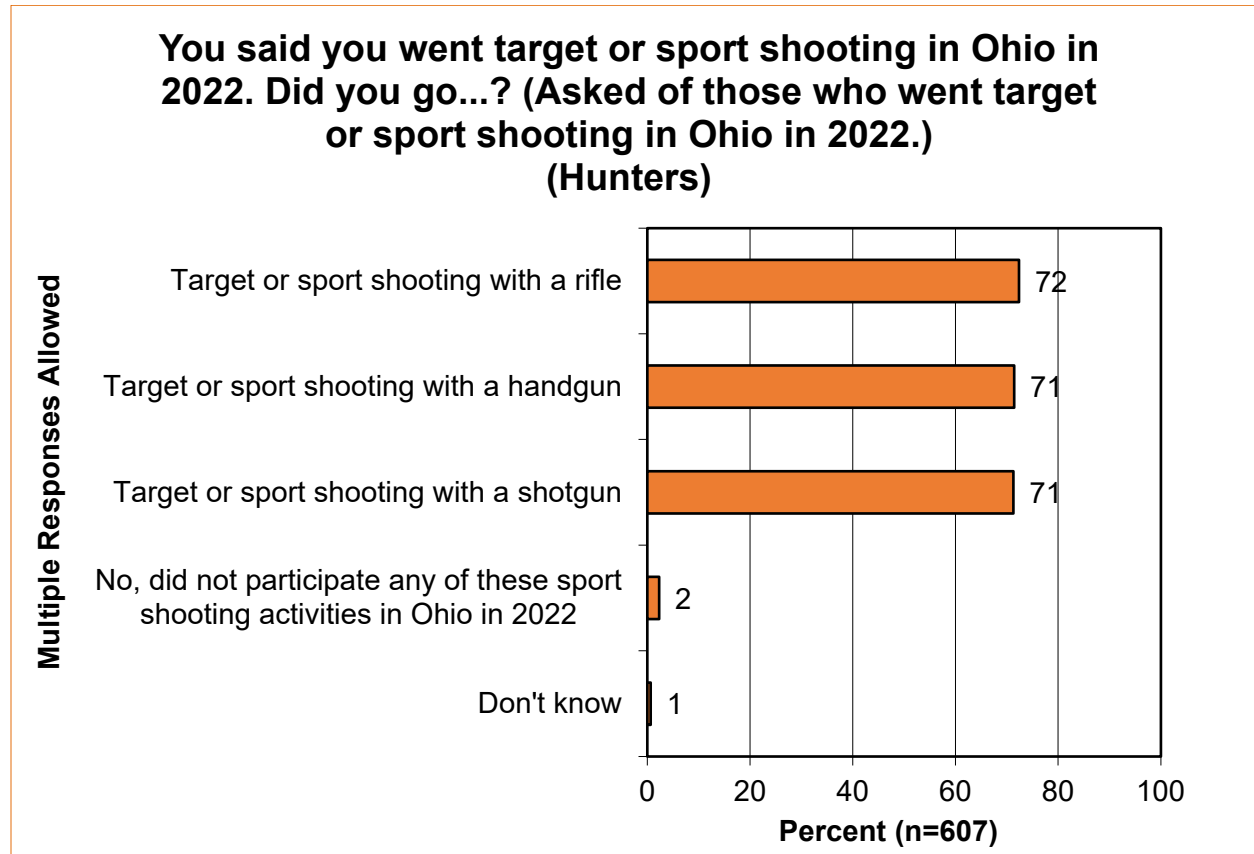
Percent of each of the following groups who went target or sport shooting in Ohio in 2022: (Hunters)



Percent of each of the following groups who participated in target archery in Ohio in 2022: (Hunters)

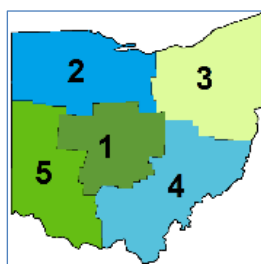


In follow-up to hunters who went sport shooting, the survey found that hunters who also shot used rifles, handguns, and shotguns about equally (71% or 72% used each). District results are tabulated below the graph.



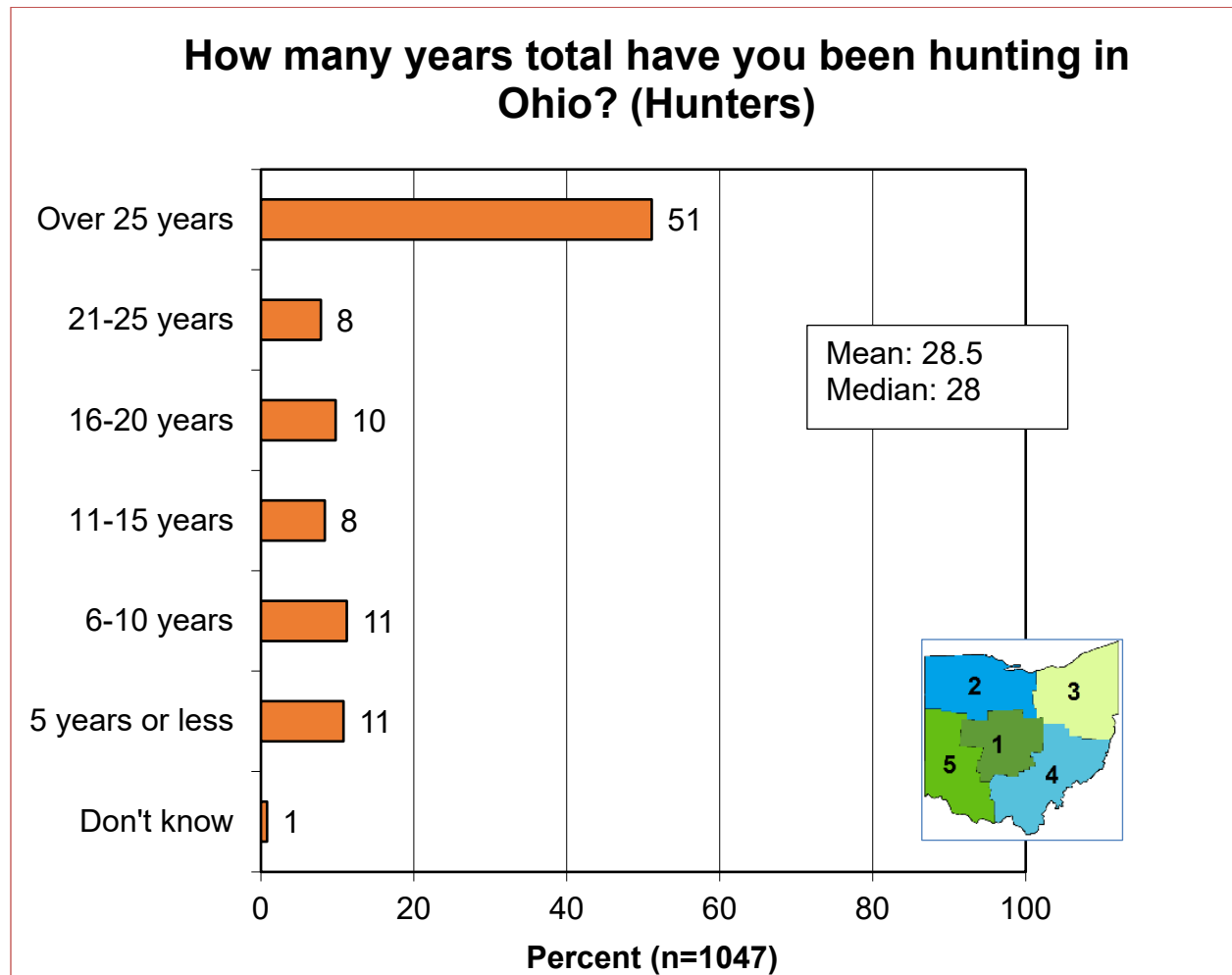
You said you went target or sport shooting in Ohio in 2022. Did you go...? (Asked of those who went sport shooting in Ohio in in 2022.) (Multiple Responses Allowed) (Hunters)

Percentages	District 1	District 2	District 3	District 4	District 5
Target or sport shooting with a rifle	68	67	73	81	72
Target or sport shooting with a shotgun	72	73	72	70	68
Target or sport shooting with a handgun	74	61	74	72	73
No, did not participate in any of these sport shooting activities in Ohio in 2022	1	3	3	1	2
Don't know	1	1	1	0	1



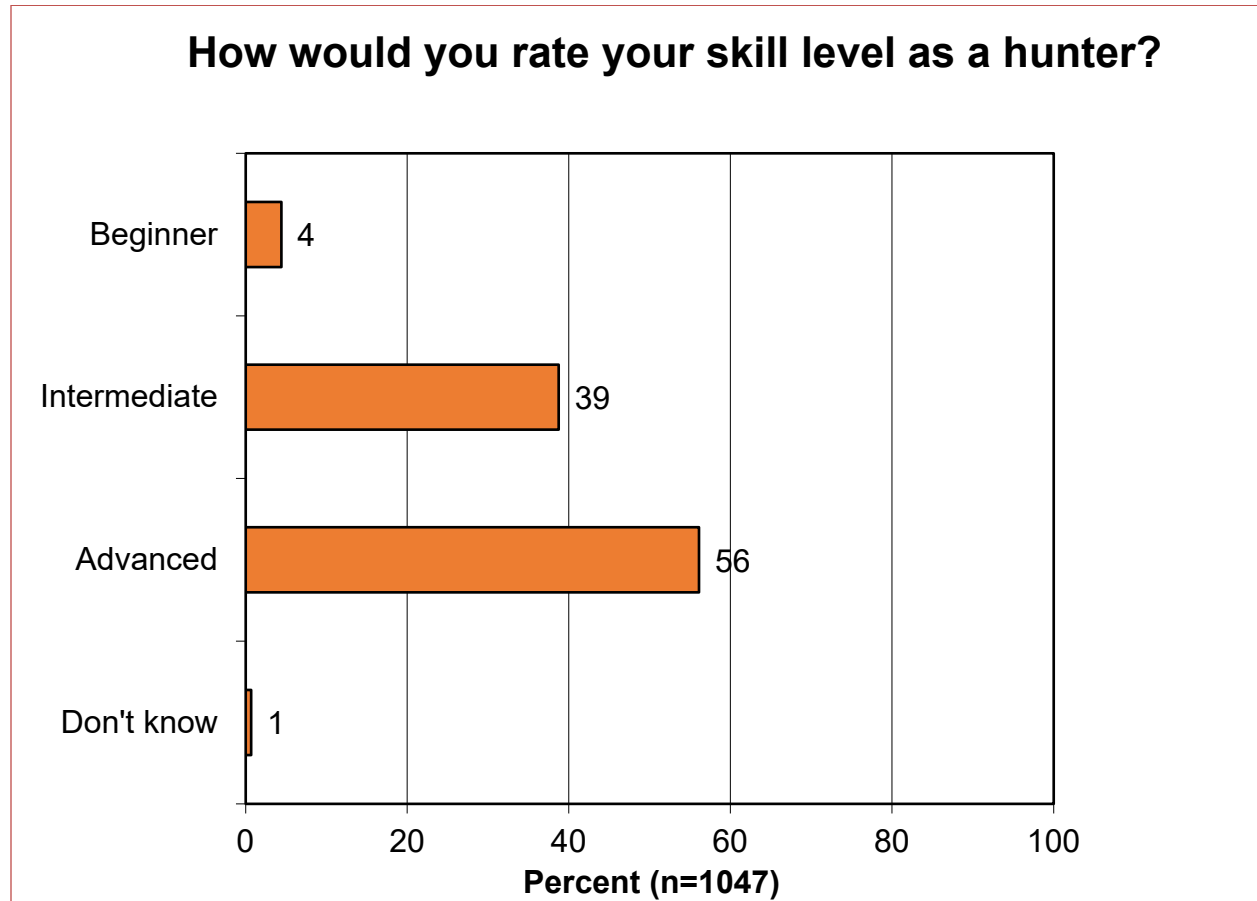
HUNTING PARTICIPATION

Just over half of hunters (51%) have been hunting in Ohio for over 25 years; the mean is 28.5 years and the median is 28 years.

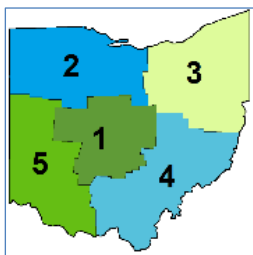


How many years total have you been hunting in Ohio? (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Over 25 years	54	44	51	61	47
21-25 years	7	8	8	9	8
16-20 years	12	11	10	9	8
11-15 years	8	11	9	6	8
6-10 years	10	16	9	8	16
5 years or less	9	9	13	7	14
Don't know	1	0	1	1	1
Mean years	28.9	27.1	28.5	31.8	26.7
Median years	28	23	29	34	25

Consistent with the previous results, over half of hunters (56%) consider themselves to be at an advanced skill level, while 39% consider themselves intermediate. Only 4% say they are beginners.

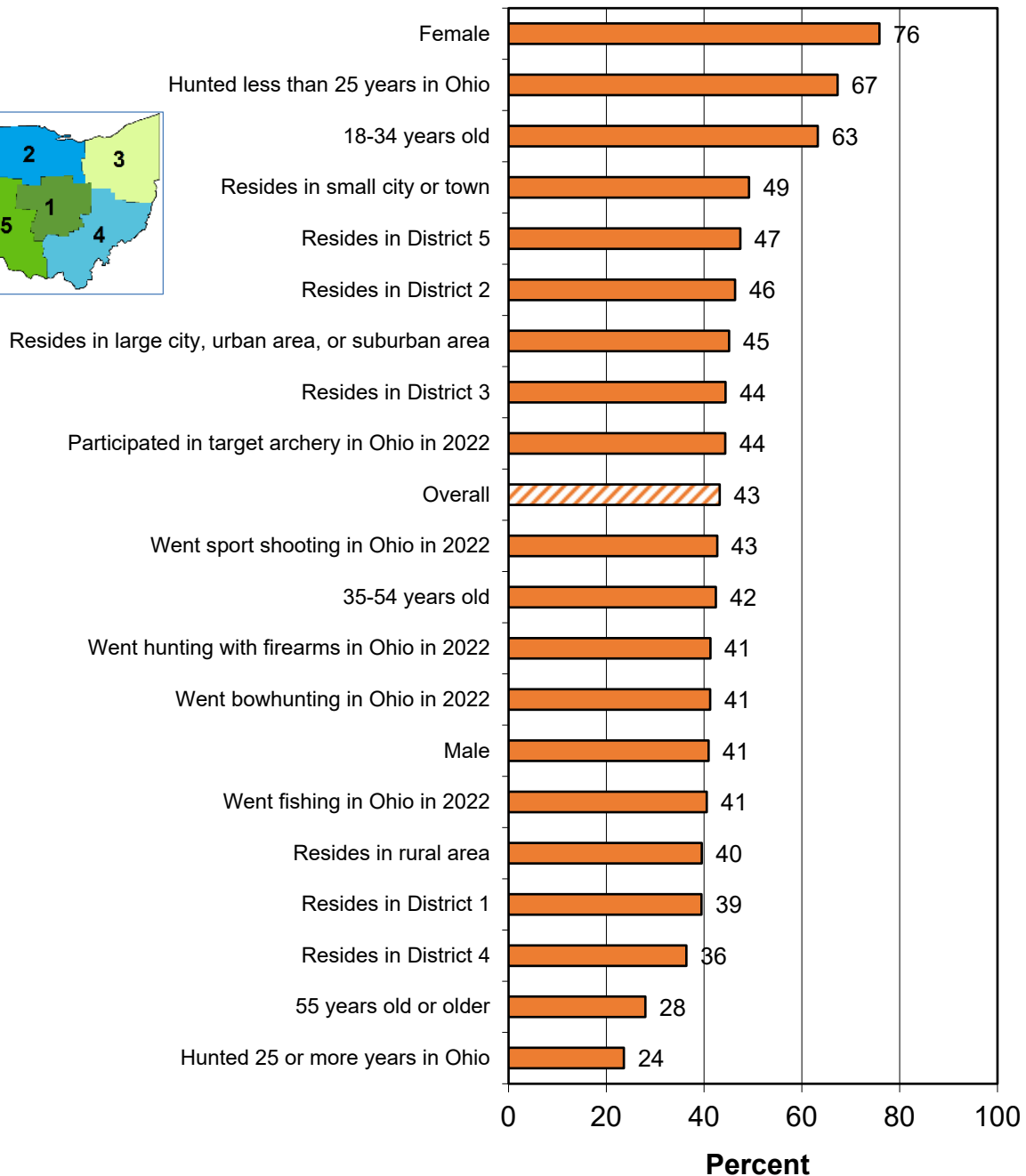
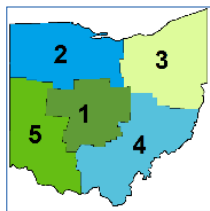


How would you rate your skill level as a hunter? (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Beginner	2	5	7	2	4
Intermediate	37	42	38	35	43
Advanced	60	52	56	62	52
Don't know	1	2	0	1	1

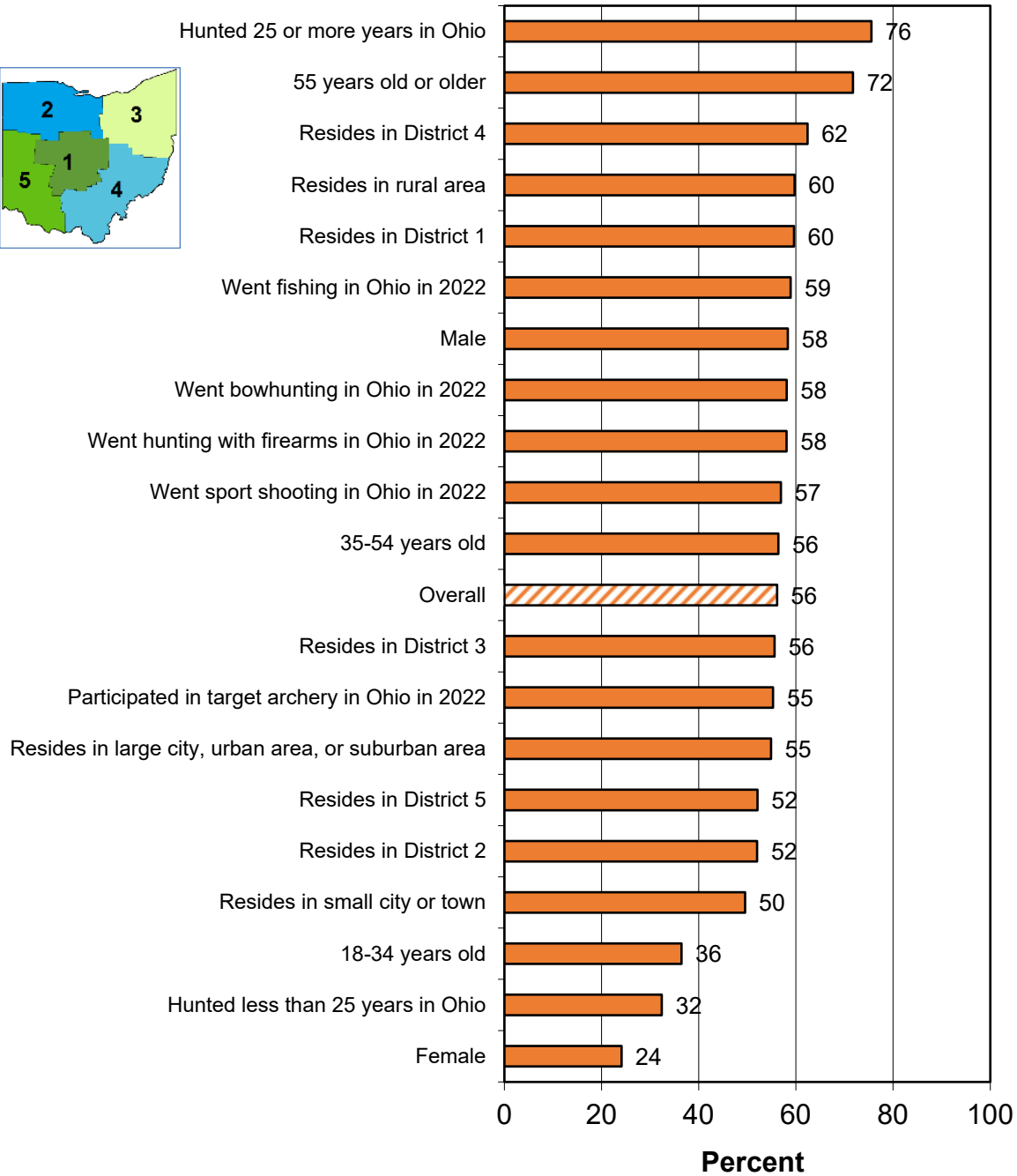
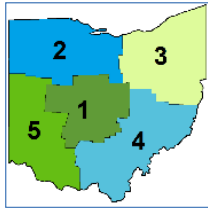


Demographic-participatory graphs are shown for those who rated their skill level as beginner or intermediate (combined) and for those who rated their skill level as advanced.

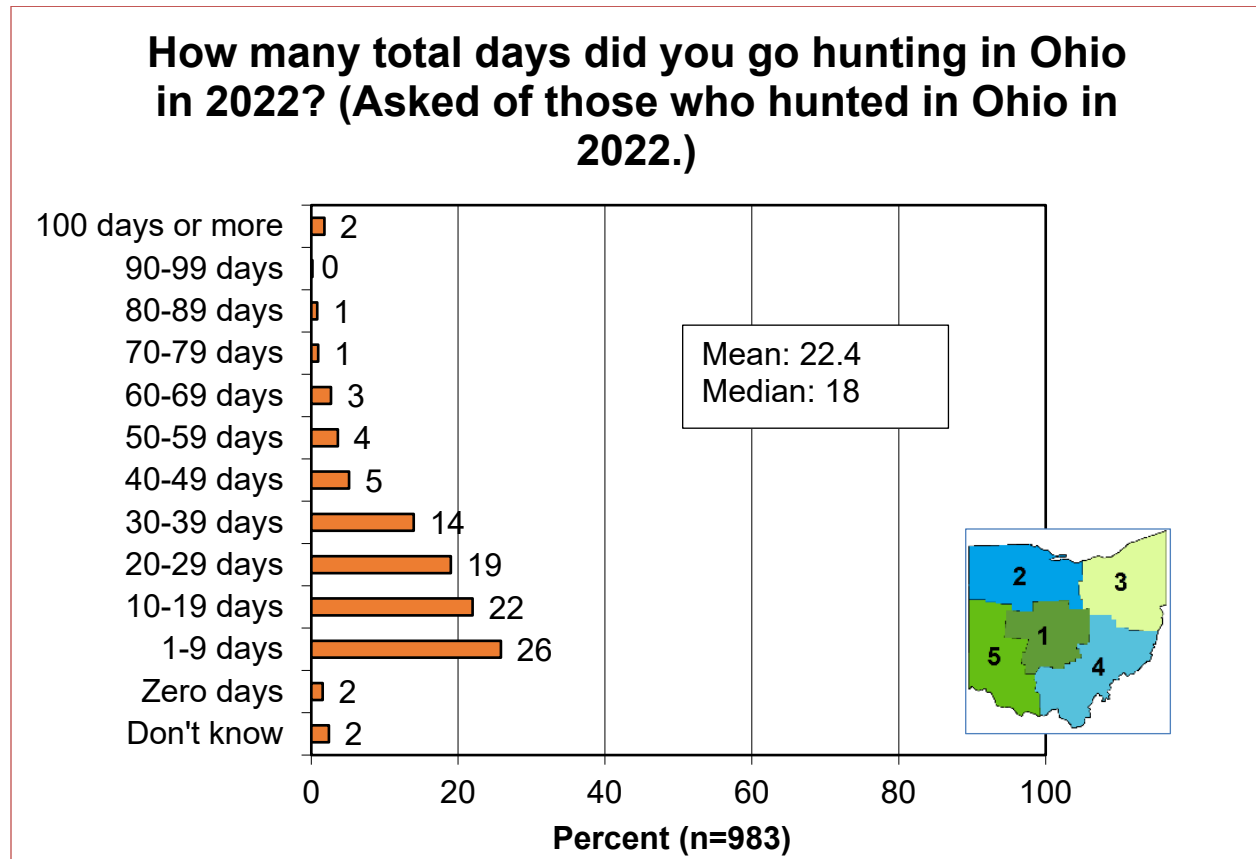
Percent of each of the following groups who rate their hunting skill level as beginner or intermediate: (Hunters)



Percent of each of the following groups who rate their hunting skill level as advanced: (Hunters)

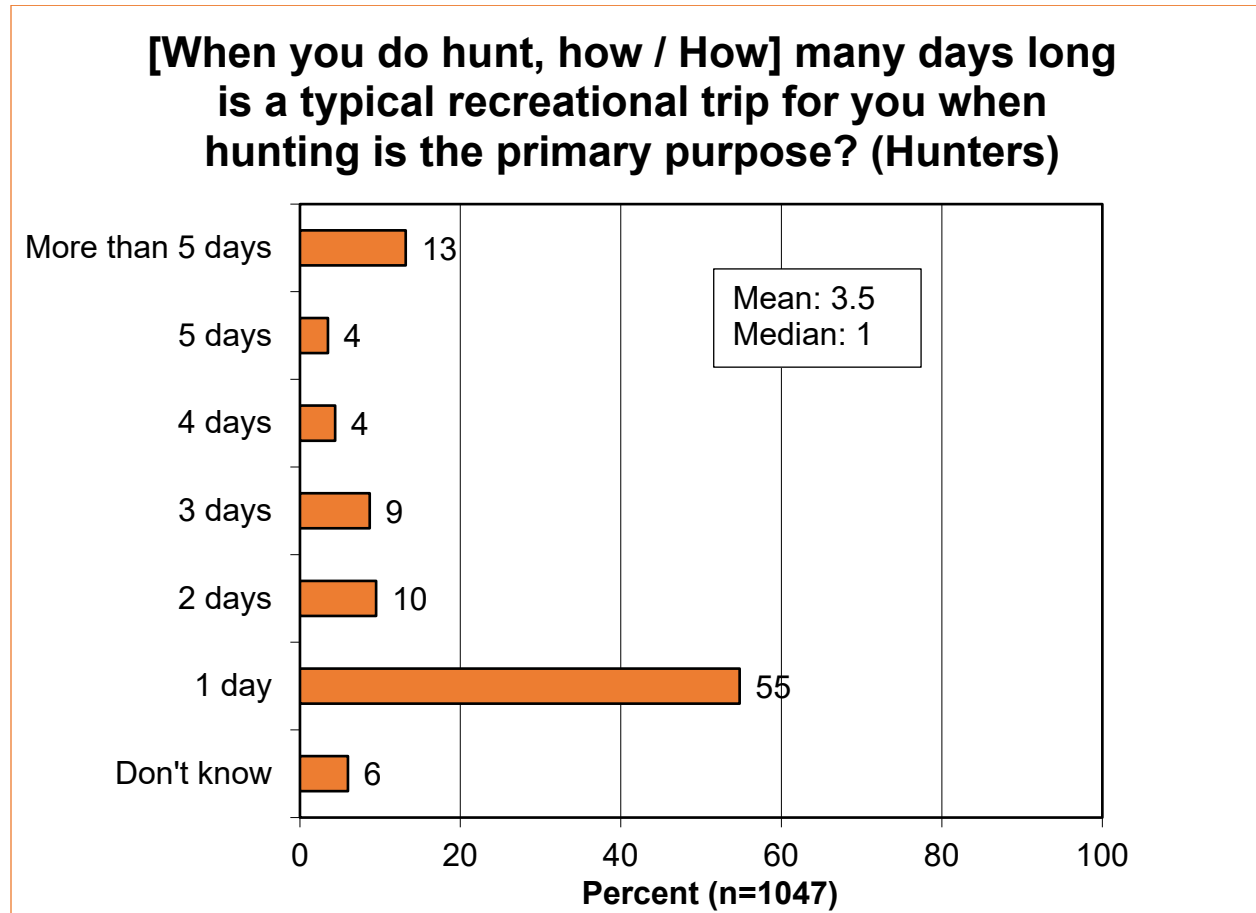


This graph shows the days of participation in hunting in Ohio in 2022. The mean is 22.4 days, while the median is 18 days.

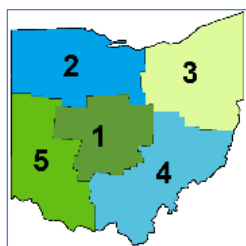


How many total days did you go hunting in Ohio in 2022? (Asked of those who hunted in Ohio in 2022.) (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
100 days or more	0	3	2	2	2
90-99 days	1	0	0	0	1
80-89 days	0	0	1	1	2
70-79 days	1	1	1	2	1
60-69 days	2	4	3	3	2
50-59 days	4	5	3	5	3
40-49 days	7	4	4	5	6
30-39 days	16	15	14	13	11
20-29 days	20	17	21	18	18
10-19 days	22	24	23	15	25
1-9 days	25	25	24	32	25
0 days	1	1	2	1	2
Don't know	2	2	3	3	3
Mean days	20.3	24.1	22.3	22.8	22.2
Median days	20	19	18	20	15

Over half of hunters (55%) typically have a 1-day trip for the primary purpose of hunting.

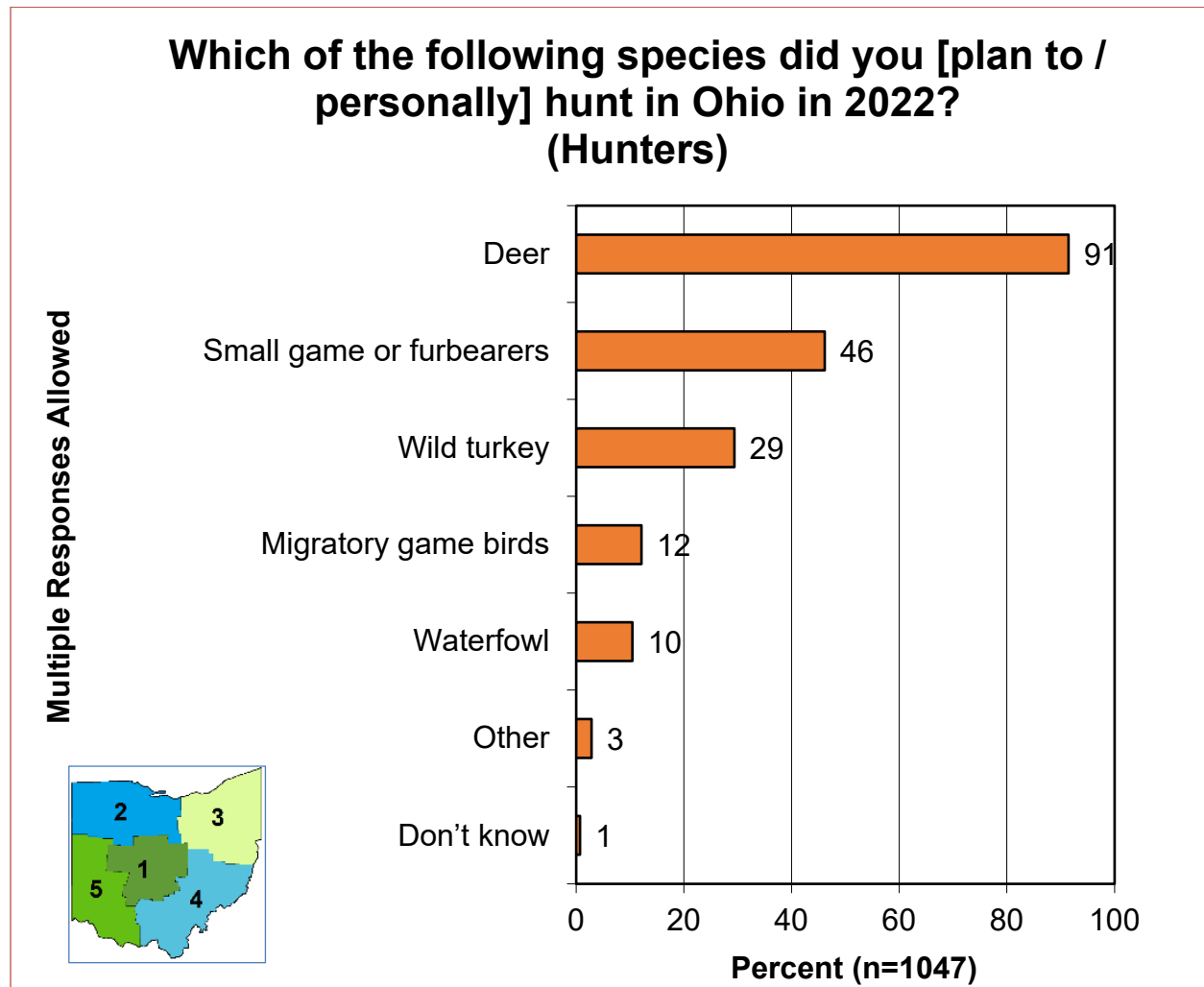


[When you do hunt, how / How] many days long is a typical recreational trip for you when hunting is the primary purpose? (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
More than 5 days	15	11	13	15	12
5 days	2	4	2	2	8
4 days	4	5	4	6	4
3 days	12	9	7	2	13
2 days	10	6	12	7	9
1 day	53	57	54	62	50
Don't know	4	7	7	6	5
Mean days	3.5	3.4	3.2	3.8	3.9
Median days	1	1	1	1	1



SPECIES HUNTED AND EQUIPMENT USED

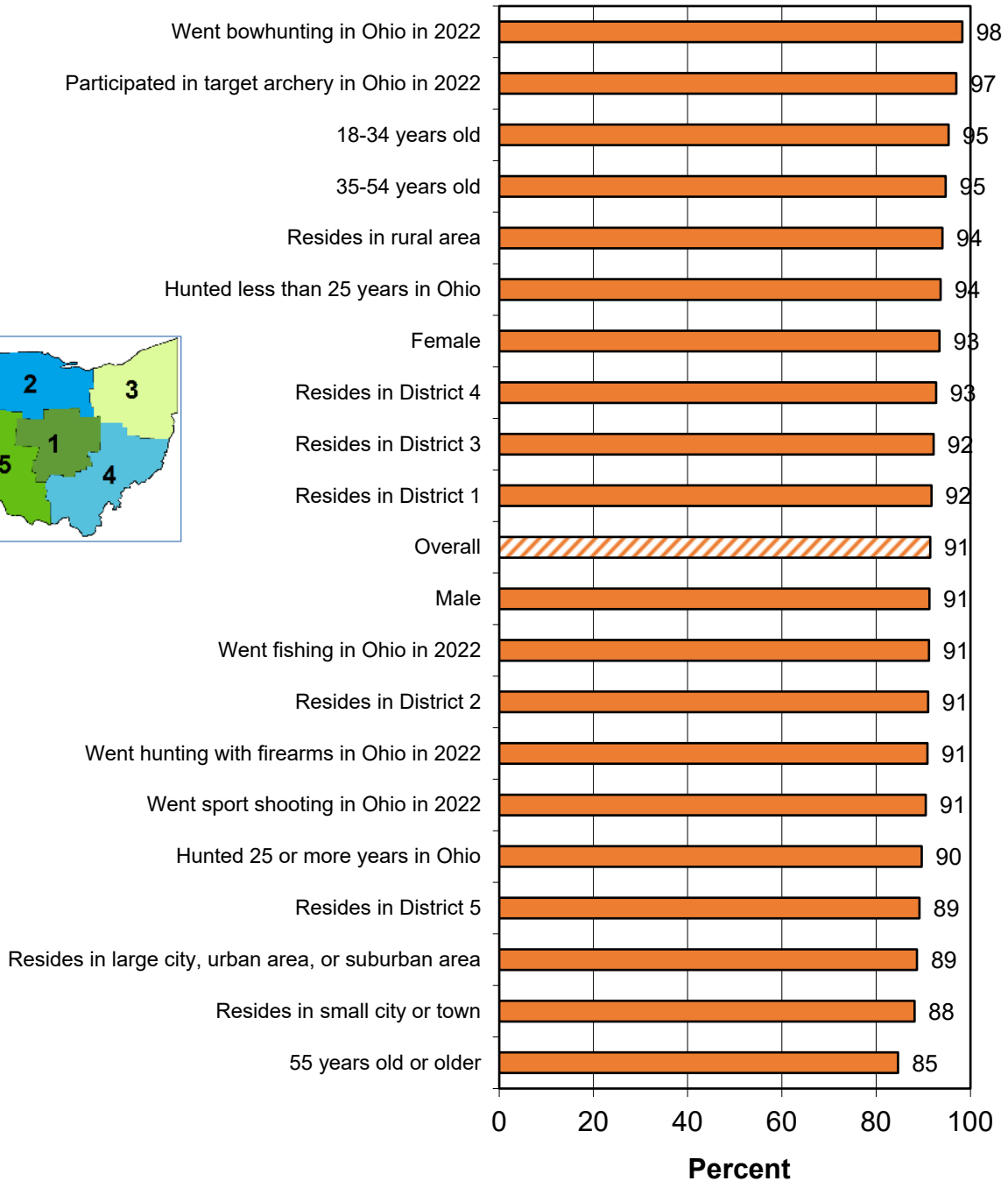
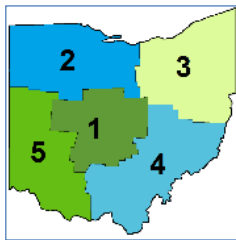
Most hunters (91%) hunted or planned to hunt for deer in 2022. This is distantly followed by small game or furbearers (46%) and wild turkey (29%).



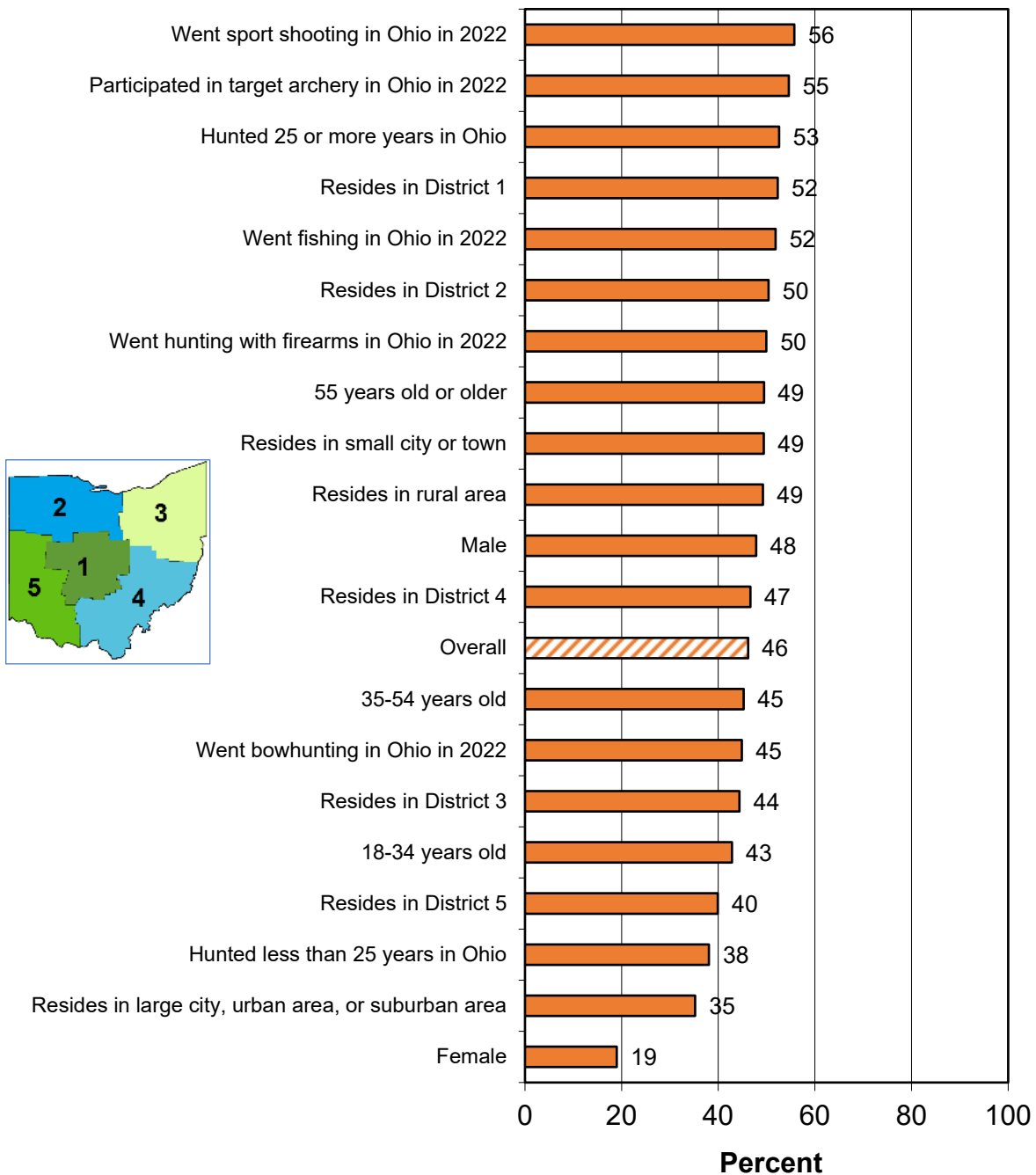
Which of the following species did you [plan to / personally] hunt in Ohio in 2022? (Multiple Responses Allowed) (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Deer	92	91	92	93	89
Small game or furbearers	52	50	44	47	40
Wild turkey	23	24	34	34	28
Migratory game birds	19	11	10	7	15
Waterfowl	13	15	10	5	9
Other	0	3	5	2	1
Don't know	0	1	0	1	1

Demographic-participatory graphs are shown for each of the previously listed species or species groups.

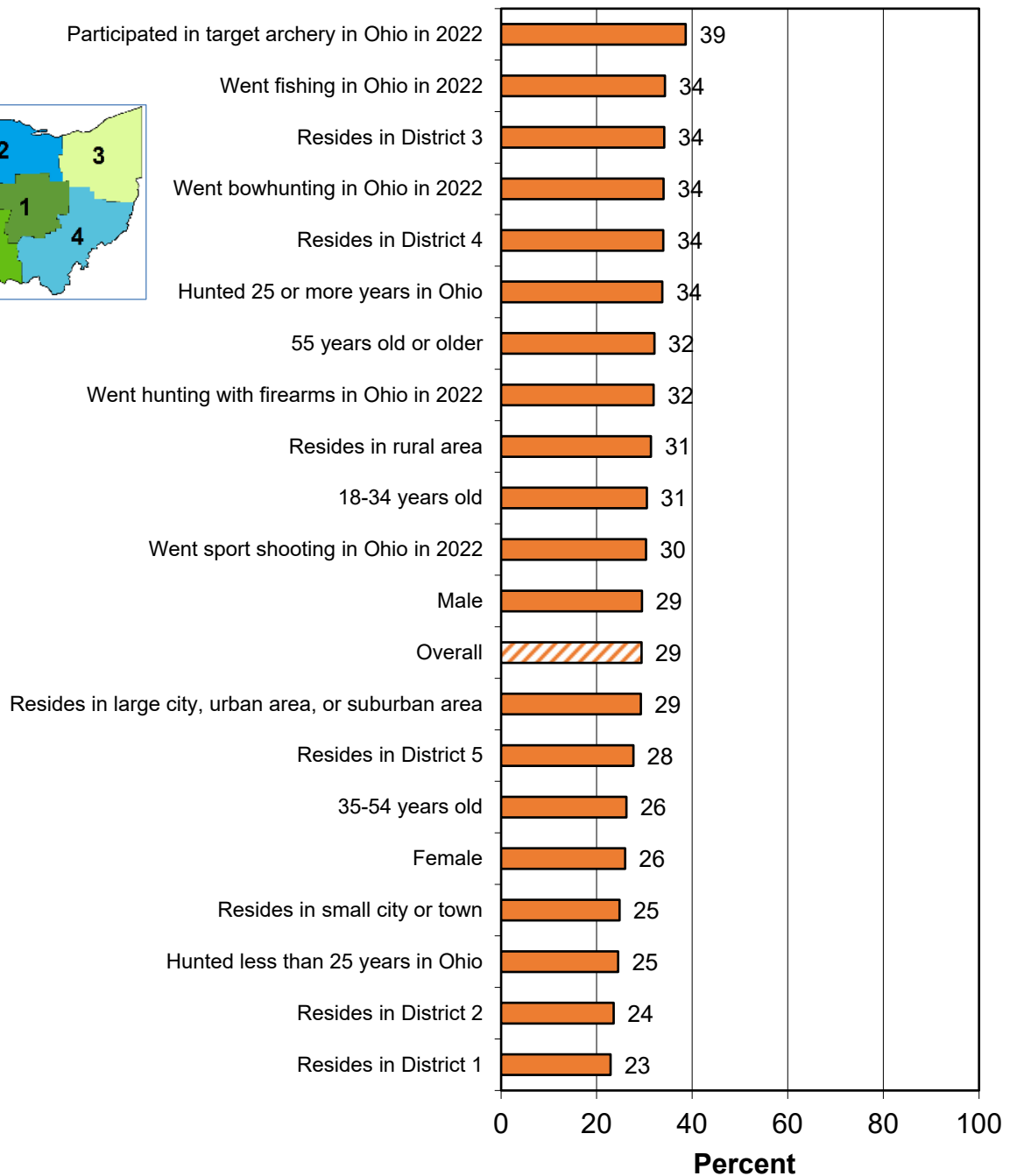
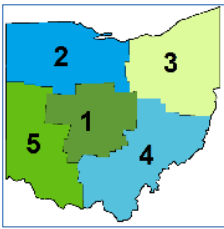
Percent of each of the following groups who hunted or planned to hunt deer in Ohio in 2022: (Hunters)



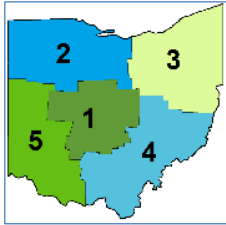
Percent of each of the following groups who who hunted or planned to hunt small game or furbearers in Ohio in 2022: (Hunters)



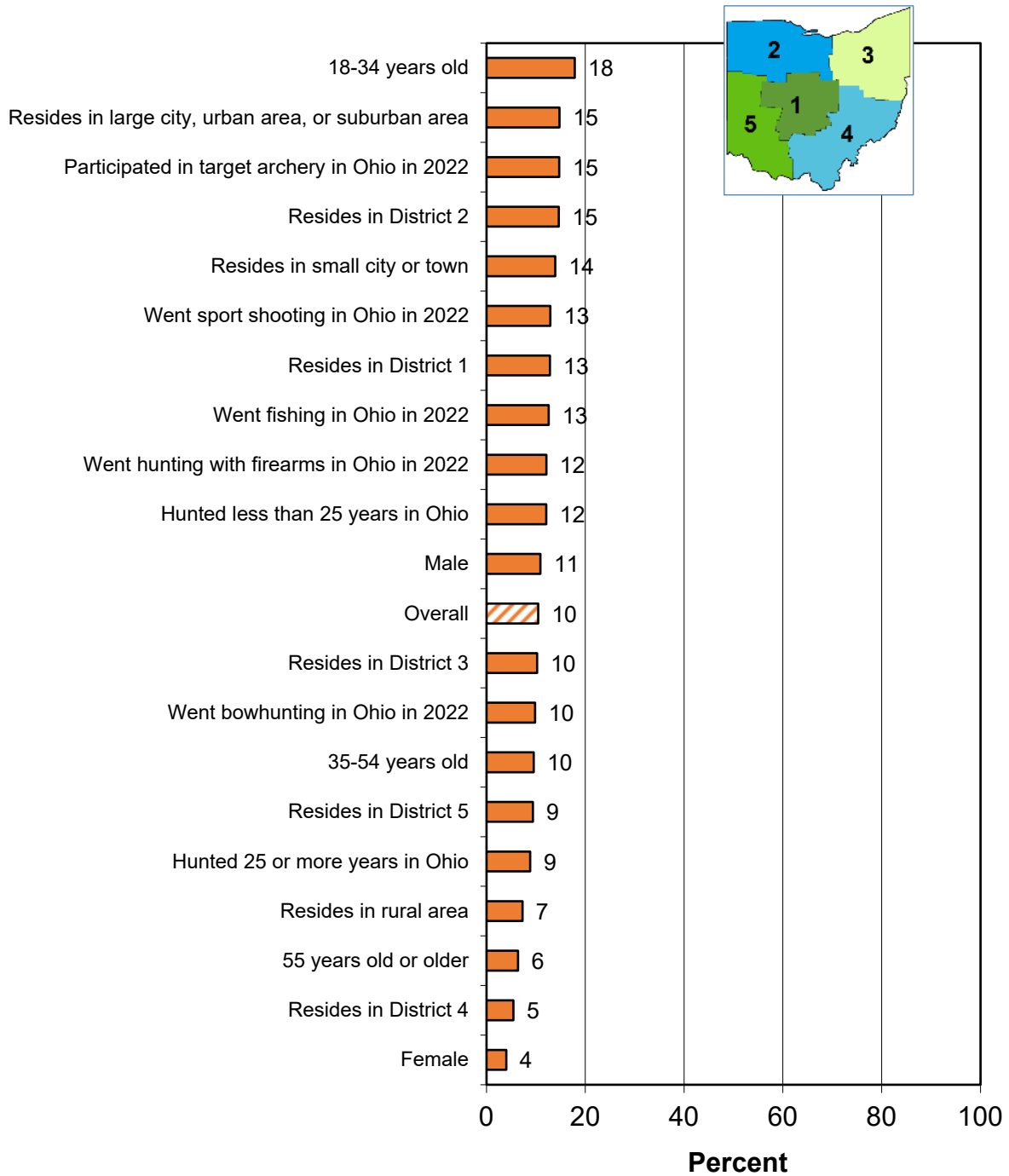
Percent of each of the following groups who who hunted or planned to hunt wild turkey in Ohio in 2022: (Hunters)



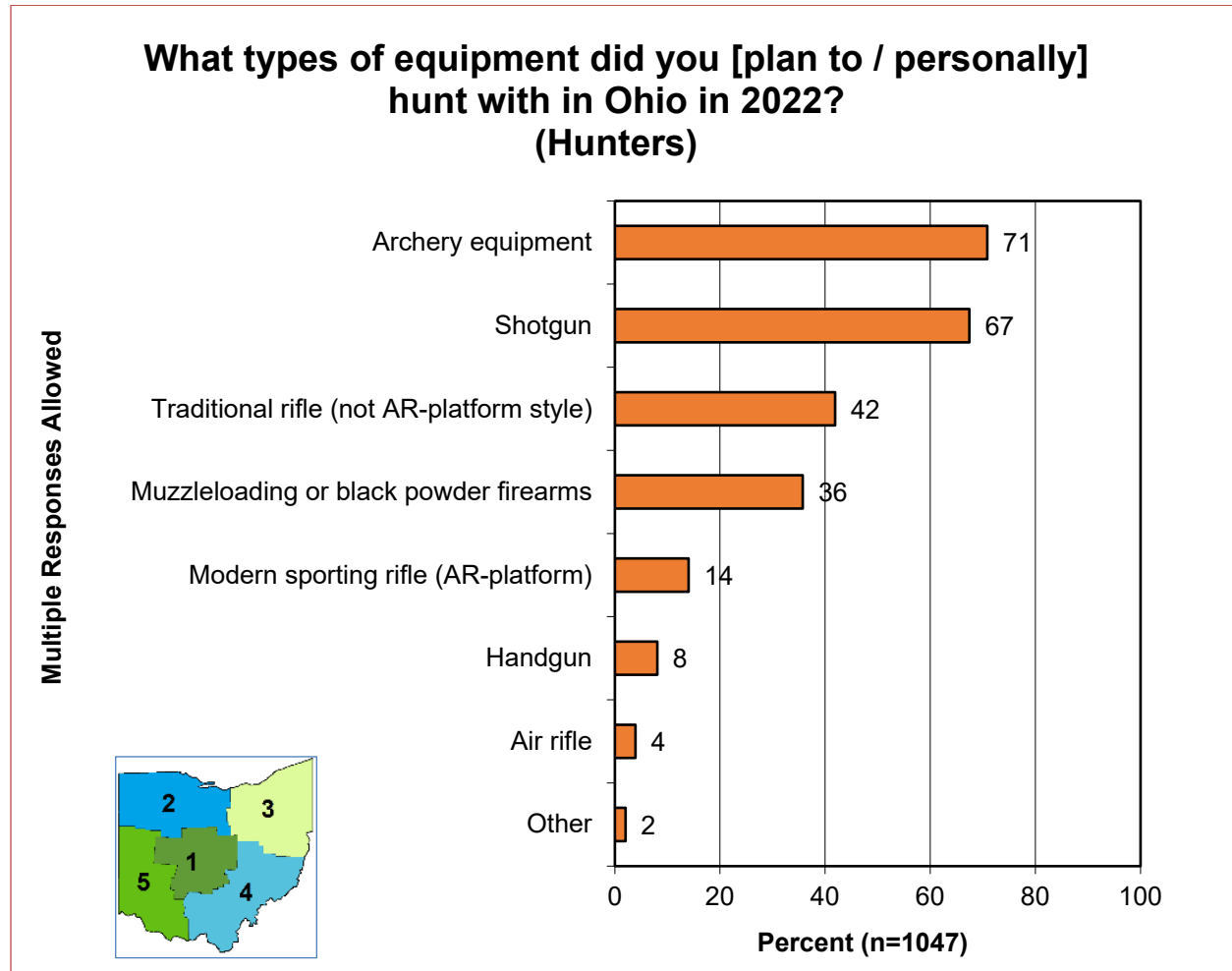
Percent of each of the following groups who who hunted or planned to hunt migratory game birds in Ohio in 2022: (Hunters)



Percent of each of the following groups who who hunted or planned to hunt waterfowl in Ohio in 2022: (Hunters)



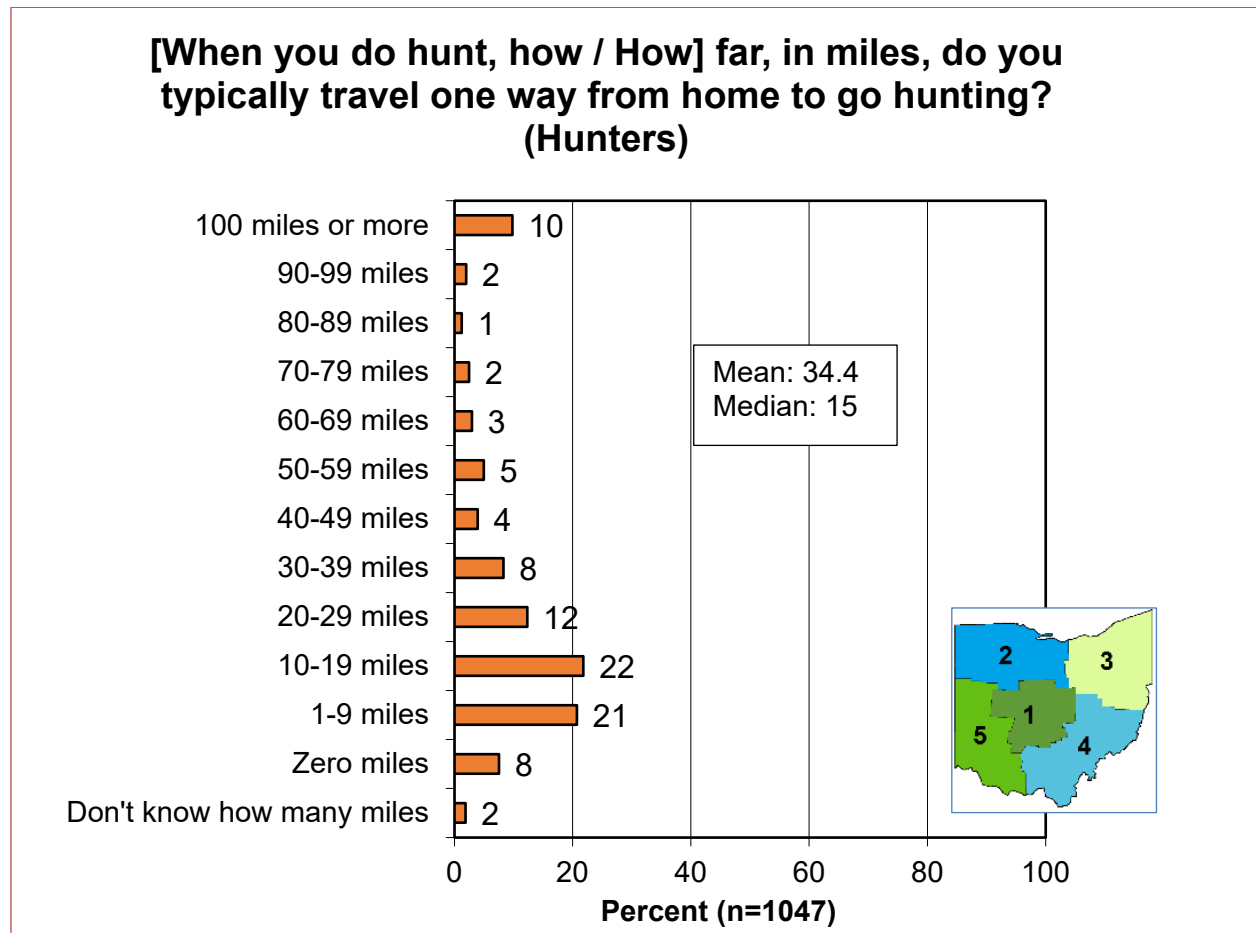
Hunters most often hunted or planned to hunt with archery equipment in 2022 (71% did so), closely followed by shotguns (67%). A second tier includes traditional rifles (42%) and muzzleloaders (36%).



What types of equipment did you [plan to / personally] hunt with in Ohio in 2022? (Multiple Responses Allowed) (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Archery equipment	70	68	77	62	70
Shotgun	72	66	68	69	62
Traditional rifle (not AR-platform style)	41	49	40	46	35
Muzzleloading or black powder firearms	38	29	41	36	30
Modern sporting rifle (AR-platform)	14	13	15	16	11
Handgun	8	7	11	5	6
Air rifle	3	4	5	5	2
Other	1	0	2	4	3

HUNTING LOCATIONS

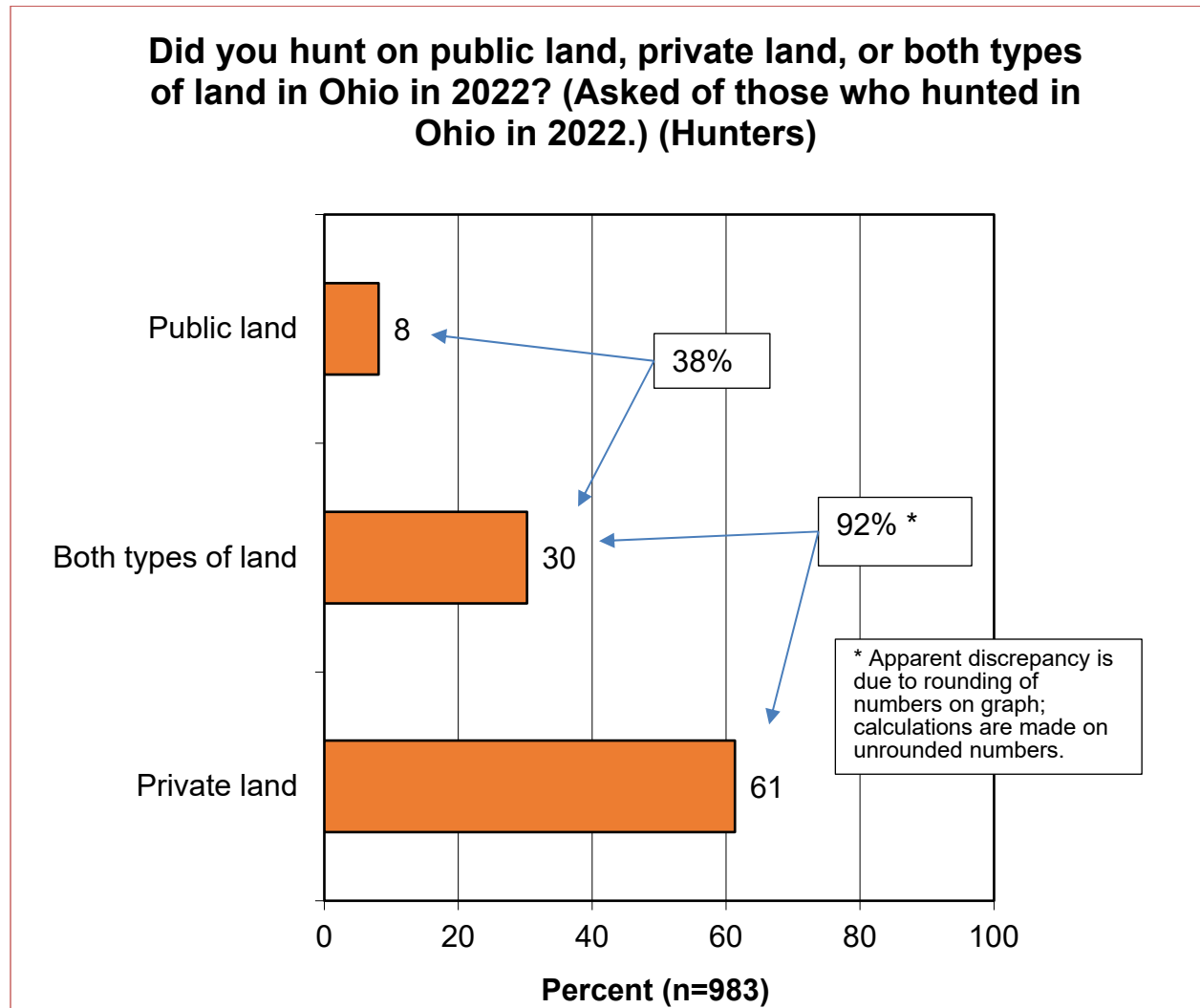
Over a quarter of hunters hunt near home (less than 10 miles); however, the mean distance is 34.4 miles and the median is 15 miles.



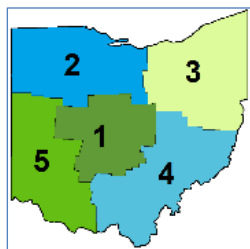
[When you do hunt, how / How] far, in miles, do you typically travel one way from home to go hunting? (Hunters)

Percentages	District 1	District 2	District 3	District 4	District 5
100 miles or more	10	9	13	0	14
90-99 miles	3	0	3	1	1
80-89 miles	3	0	2	0	1
70-79 miles	3	1	4	1	2
60-69 miles	5	3	3	1	3
50-59 miles	7	2	6	4	4
40-49 miles	5	4	4	2	5
30-39 miles	11	7	9	10	4
20-29 miles	11	10	12	10	17
10-19 miles	19	26	20	28	19
1-9 miles	13	32	17	24	22
0 miles	8	4	5	18	6
Don't know how many miles	3	1	1	2	3
Mean miles	42.1	29.9	40.6	14.5	37.8
Median miles	25	13	25	10	20

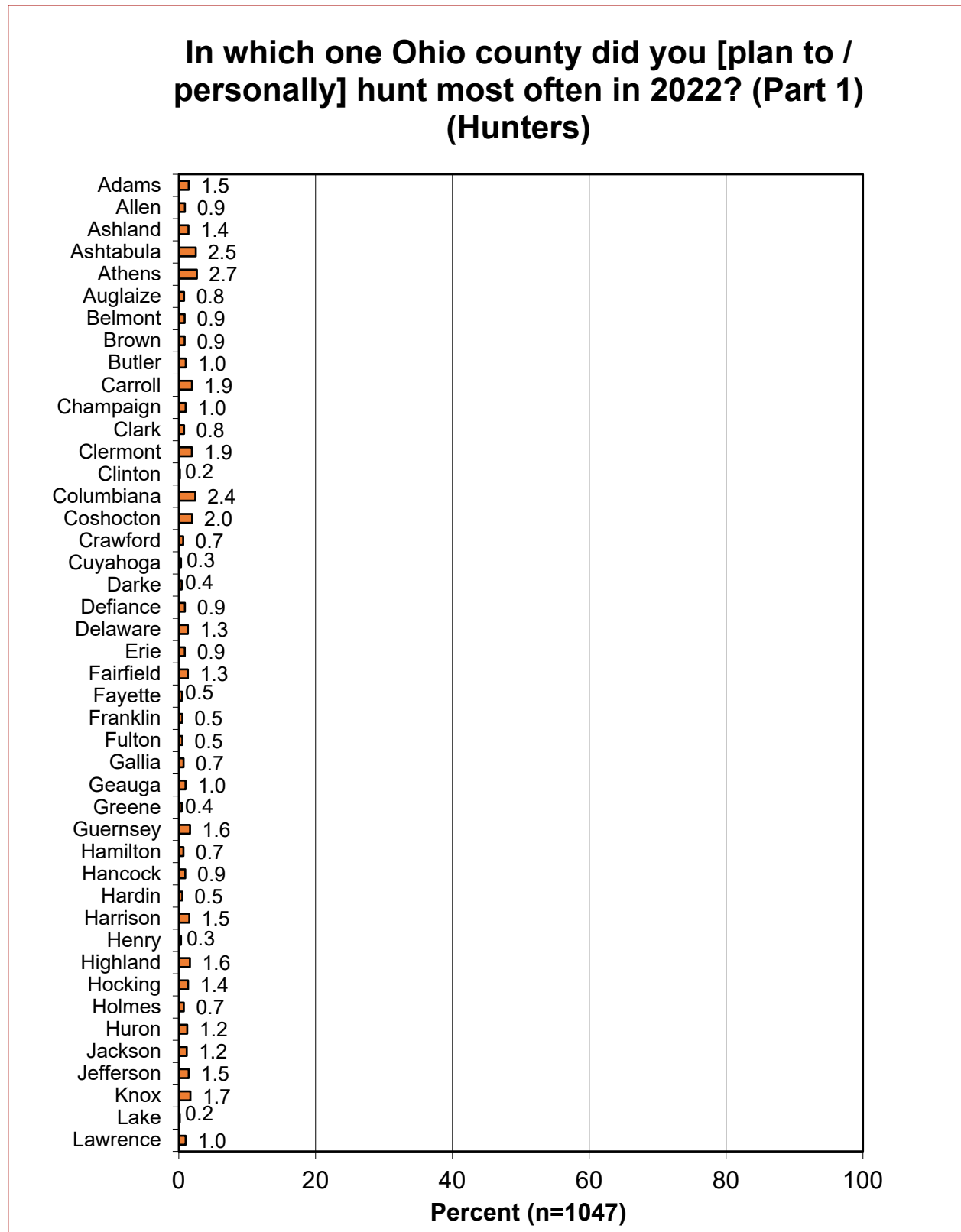
Most hunters (92%) hunt on private land (61% do so exclusively); compared to 38% who hunt on public land (8% do so exclusively).



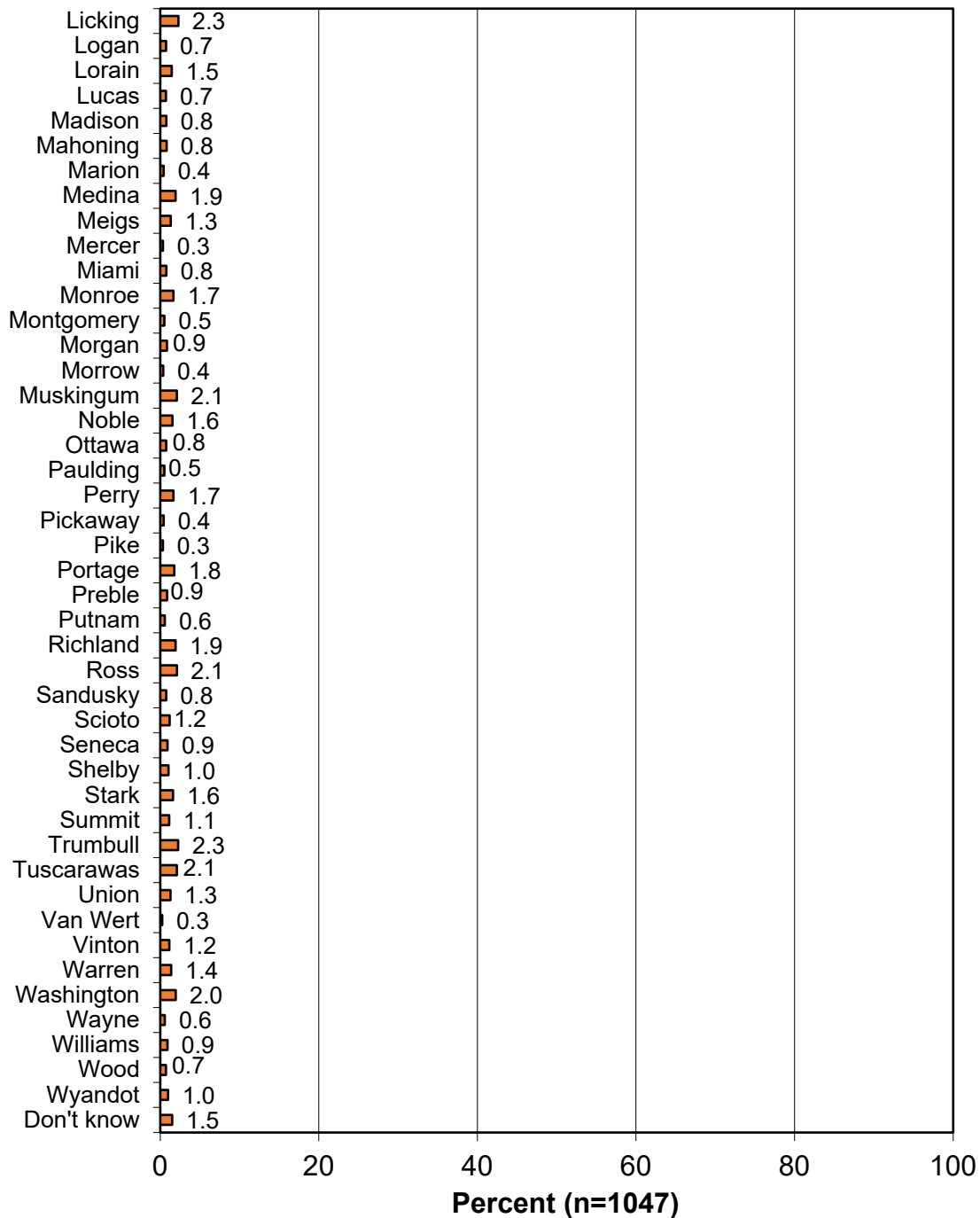
Did you hunt on public land, private land, or both types of land in Ohio in 2022? (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Public land	8	7	7	8	11
Both types of land	33	27	30	32	29
Private land	59	66	63	59	59
Don't know	0	0	0	1	1



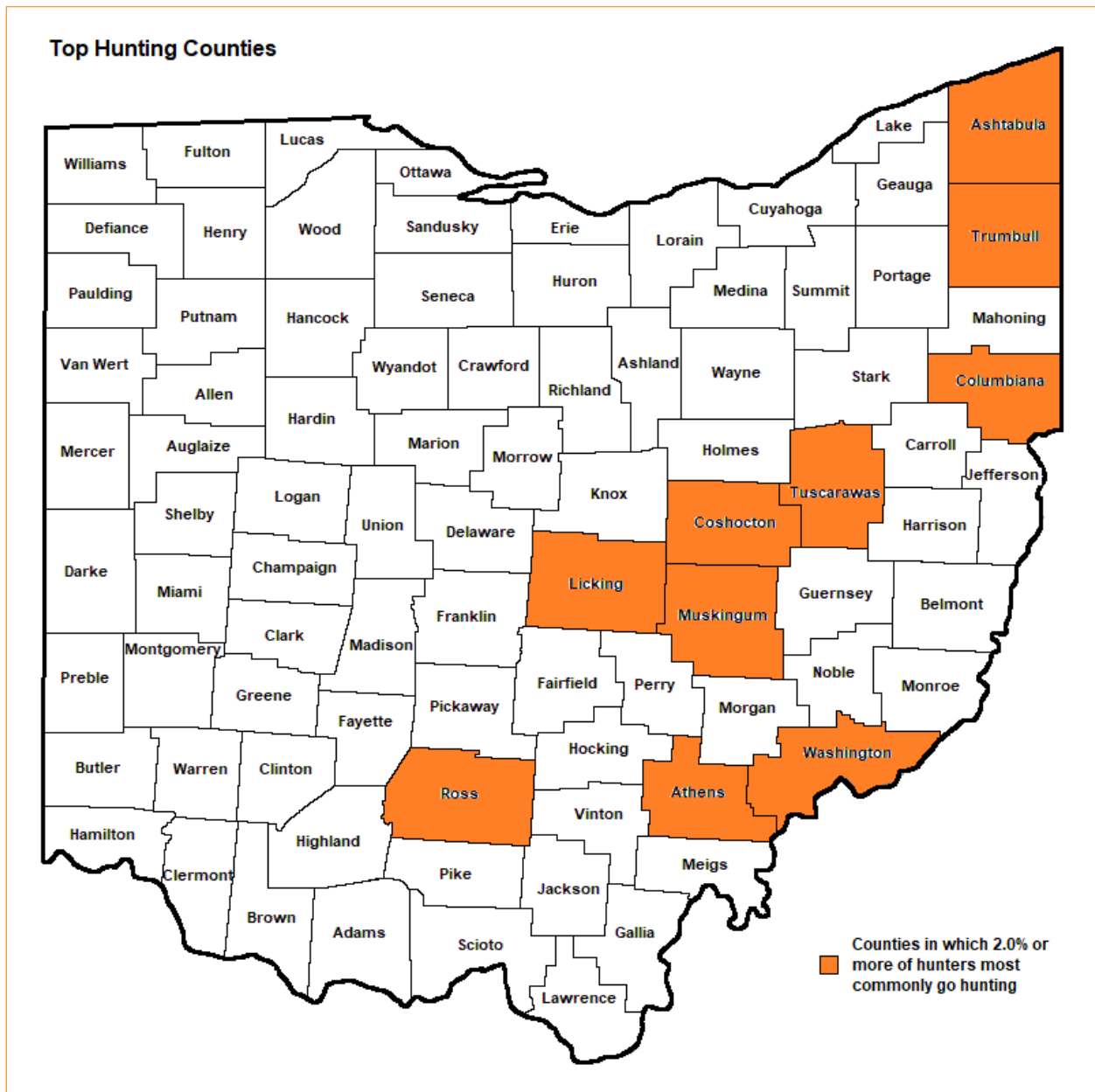
The graphs that follow show the top hunting counties.



In which one Ohio county did you [plan to / personally] hunt most often in 2022? (Part 2) (Hunters)



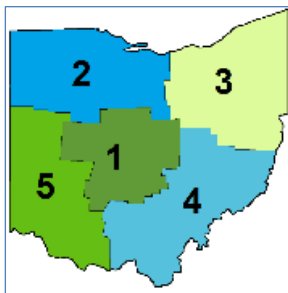
The top counties for hunting are in the Appalachian part of the state: 4 of the top 5 counties are on Ohio's eastern border.



The results regarding most-visited county are presented in the table below. The District breakdown is by where the hunter lives.

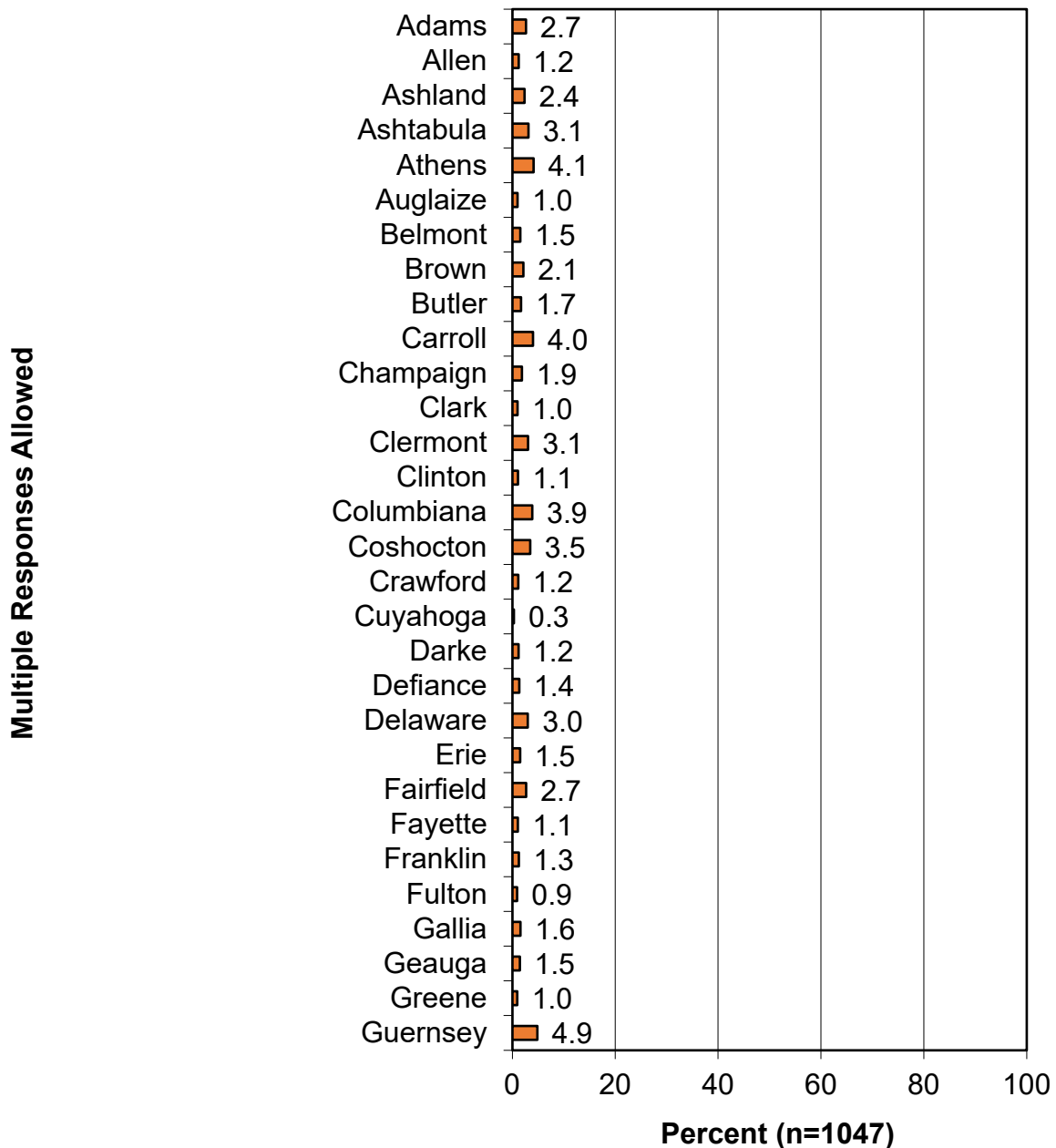
In which one Ohio county did you [plan to / personally] hunt most often in 2022? (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	1	0	0	1	7
Allen	0	5	0	0	1
Ashland	0	1	4	0	0
Ashtabula	1	0	7	0	0
Athens	3	0	2	10	1
Auglaize	0	0	0	0	4
Belmont	1	1	0	3	1
Brown	0	0	1	0	4
Butler	0	0	0	0	5
Carroll	0	0	6	0	0
Champaign	4	0	0	0	2
Clark	1	0	0	0	4
Clermont	0	0	0	0	10
Clinton	0	0	0	0	1
Columbiana	0	0	7	0	0
Coshocton	1	1	3	3	0
Crawford	0	4	0	0	0
Cuyahoga	0	0	1	0	0
Darke	0	0	0	0	2
Defiance	0	4	1	0	1
Delaware	8	0	0	0	0
Erie	0	5	1	0	0
Fairfield	8	0	0	0	0
Fayette	1	0	0	1	1
Franklin	3	0	0	0	0
Fulton	0	3	0	0	0
Gallia	1	0	0	2	1
Geauga	0	0	2	1	1
Greene	0	0	0	0	2
Guernsey	1	1	2	2	1
Hamilton	0	0	0	0	4
Hancock	0	5	1	0	0
Hardin	0	3	0	0	0
Harrison	0	0	4	0	1
Henry	0	2	0	0	0
Highland	1	0	0	0	8
Hocking	4	1	0	3	1
Holmes	0	0	2	1	0
Huron	0	8	0	0	0
Jackson	1	0	0	4	2
Jefferson	1	0	4	0	1
Knox	9	1	1	0	0
Lake	0	0	1	0	0
Lawrence	1	0	0	5	1
Licking	11	0	1	1	1
Logan	4	0	0	0	0
Lorain	0	0	4	0	0
Lucas	0	5	0	0	0
Madison	4	0	0	1	1
Mahoning	0	0	2	0	0
Marion	3	0	0	0	0

In which one Ohio county did you [plan to / personally] hunt most often in 2022? (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Medina	0	0	6	0	0
Meigs	0	0	0	7	1
Mercer	0	0	0	0	2
Miami	0	0	0	0	4
Monroe	1	0	3	3	0
Montgomery	0	0	0	0	3
Morgan	1	1	0	3	1
Morrow	2	0	0	1	0
Muskingum	2	0	1	8	1
Noble	2	0	2	5	0
Ottawa	0	4	1	0	0
Paulding	0	3	0	0	0
Perry	3	0	0	7	0
Pickaway	3	0	0	0	0
Pike	1	0	0	1	0
Portage	0	0	5	0	0
Preble	0	0	0	0	5
Putnam	0	4	0	0	0
Richland	1	11	1	0	0
Ross	4	0	0	8	1
Sandusky	0	4	1	0	0
Scioto	0	0	0	6	1
Seneca	0	6	0	0	0
Shelby	0	0	0	0	6
Stark	0	0	5	0	0
Summit	0	0	3	0	0
Trumbull	0	0	7	0	0
Tuscarawas	0	0	6	0	0
Union	6	0	1	0	1
Van Wert	0	2	0	0	0
Vinton	3	0	0	2	2
Warren	0	0	0	0	8
Washington	0	0	1	11	0
Wayne	0	0	2	1	0
Williams	0	4	1	0	0
Wood	0	5	0	0	0
Wyandot	1	6	0	0	0
Don't know	1	2	2	1	2



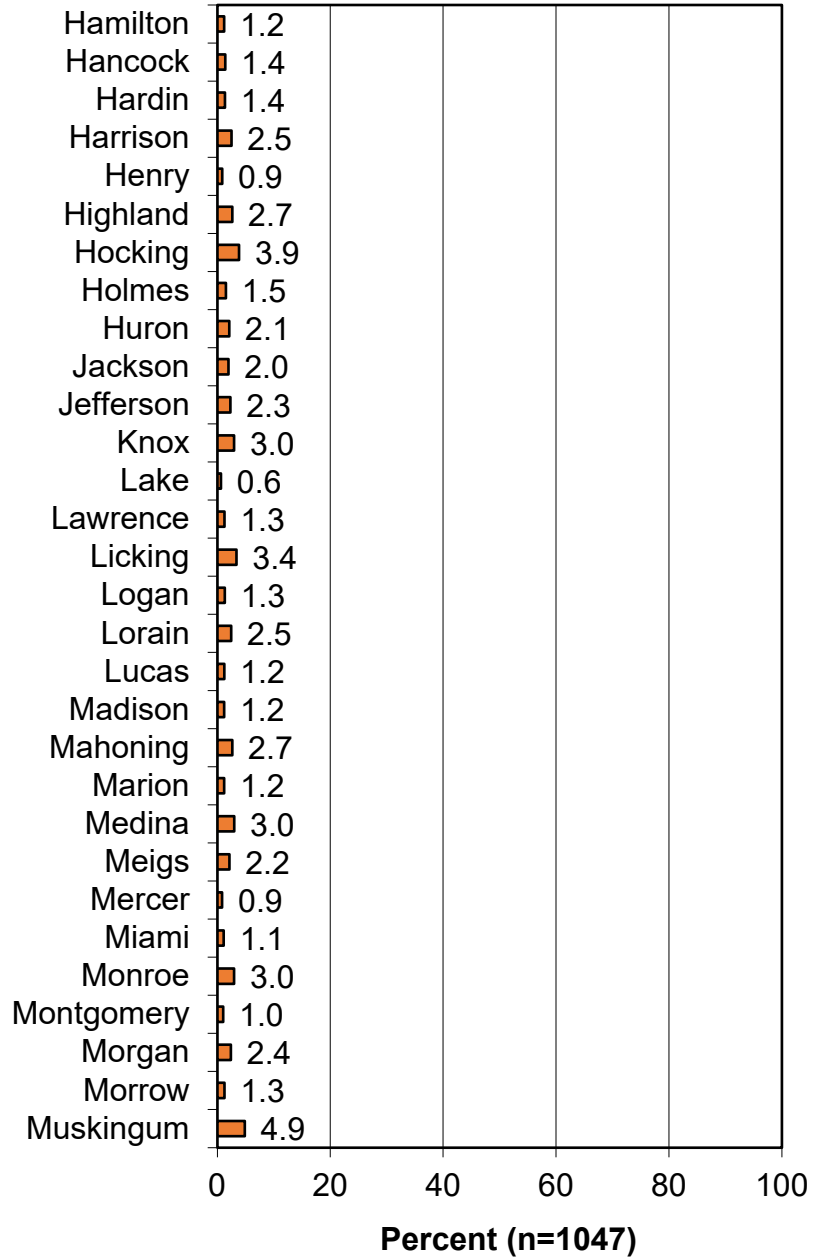
Below and on the following pages are graphs showing all counties visited (or to which a trip was planned) for hunting, including the most-visited as well as any other counties that were visited.

All counties visited or planned for a visit for hunting in Ohio in 2022. (Part 1) (Hunters)



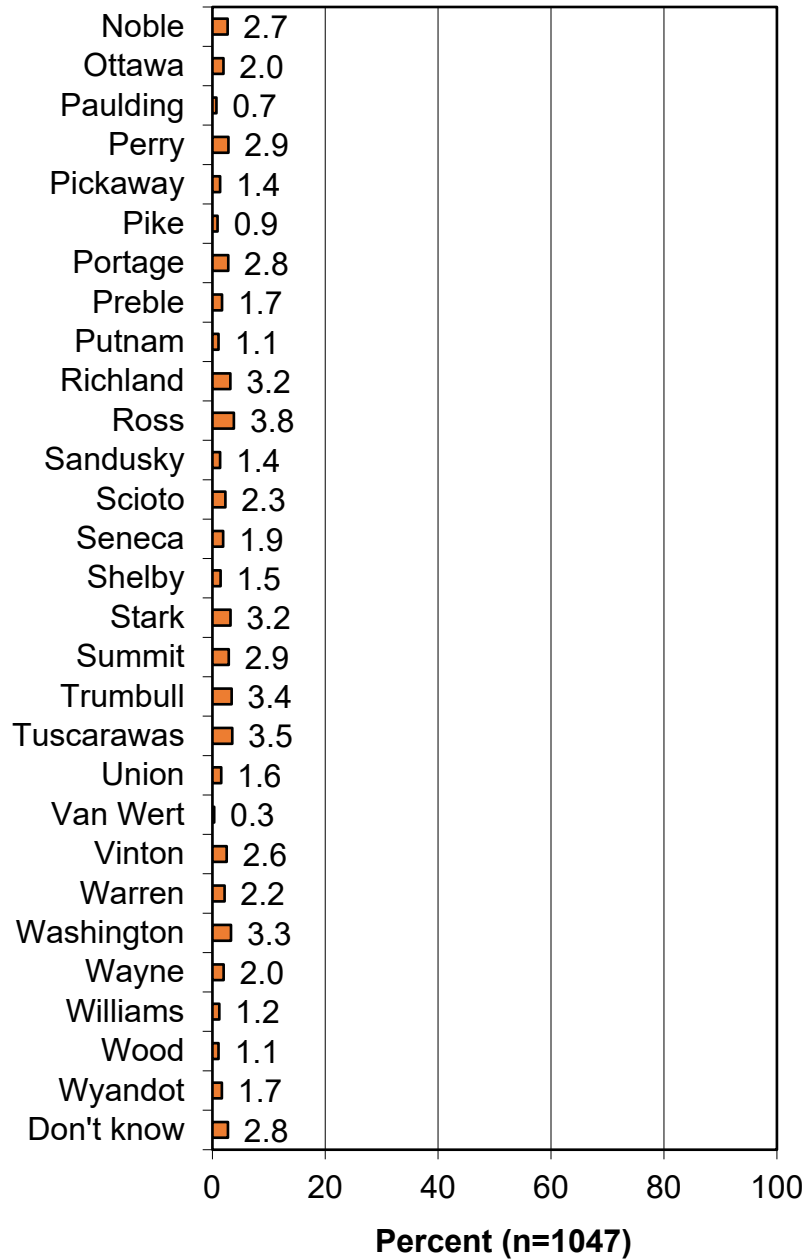
All counties visited or planned for a visit for hunting in Ohio in 2022. (Part 2) (Hunters)

Multiple Responses Allowed



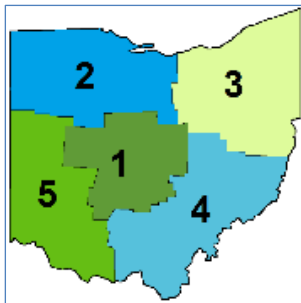
All counties visited or planned for a visit for hunting in Ohio in 2022. (Part 3) (Hunters)

Multiple Responses Allowed



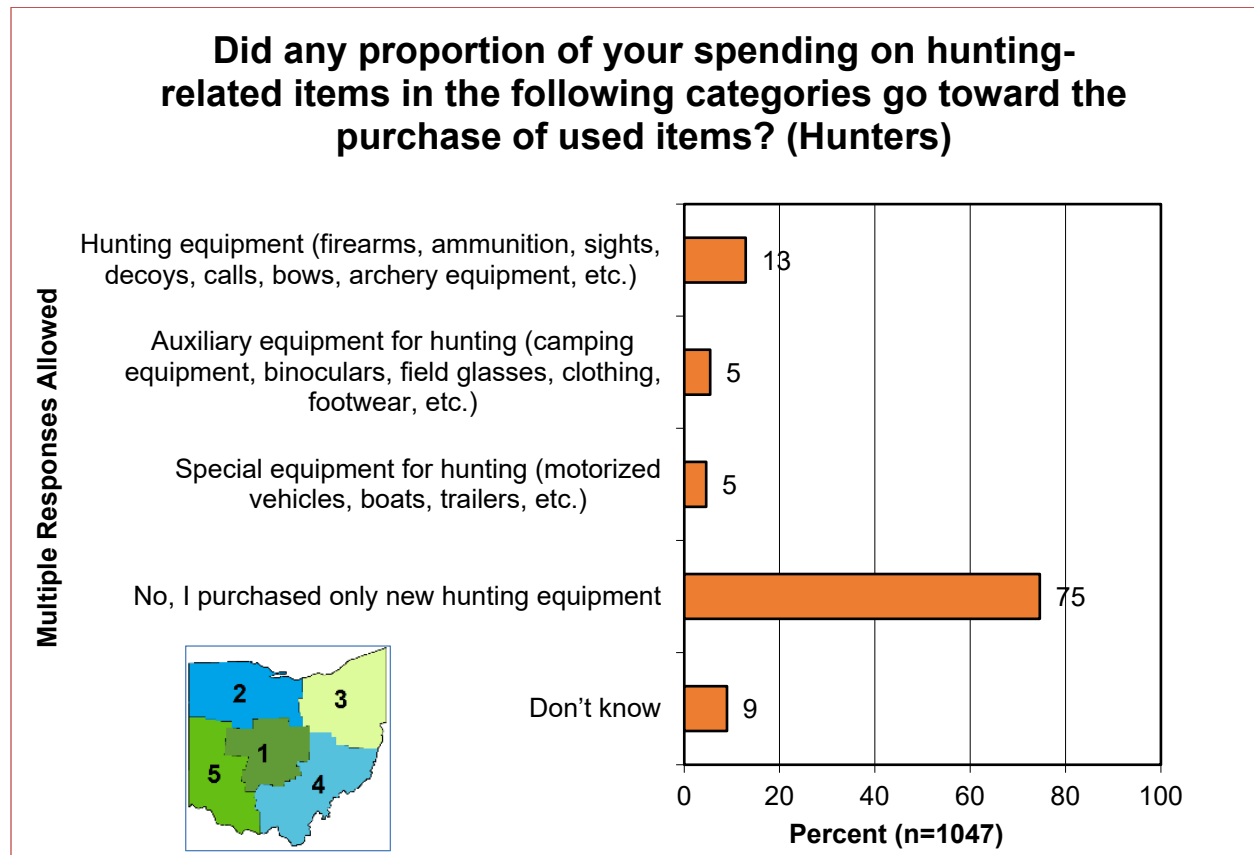
All counties visited or planned for a visit for hunting in Ohio in 2022. (Multiple Responses Allowed) (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	1	0	0	1	12
Allen	0	6	0	0	1
Ashland	0	4	5	1	0
Ashtabula	0	0	9	0	0
Athens	4	0	2	14	3
Auglaize	0	0	0	0	5
Belmont	0	1	1	5	1
Brown	1	0	0	0	10
Butler	0	0	0	0	8
Carroll	1	0	12	0	0
Champaign	7	0	0	0	3
Clark	1	0	0	0	5
Clermont	0	0	0	0	16
Clinton	1	0	0	0	5
Columbiana	0	0	12	0	0
Coshocton	6	2	4	5	0
Crawford	0	6	0	1	0
Cuyahoga	0	0	1	0	0
Darke	0	0	0	0	7
Defiance	0	7	0	0	0
Delaware	16	1	0	1	0
Erie	0	7	1	1	0
Fairfield	14	0	0	2	0
Fayette	3	0	0	2	1
Franklin	7	0	0	0	0
Fulton	0	6	0	0	0
Gallia	1	0	0	4	3
Geauga	0	0	4	1	0
Greene	0	0	0	1	5
Guernsey	2	3	8	8	1
Hamilton	0	0	0	0	7
Hancock	0	7	0	0	0
Hardin	1	7	0	0	0
Harrison	0	0	7	0	0
Henry	0	5	0	0	0
Highland	2	0	0	2	10
Hocking	10	2	1	7	3
Holmes	0	0	4	1	0
Huron	0	10	1	0	0
Jackson	2	1	0	5	3
Jefferson	0	0	6	0	0
Knox	12	2	1	1	0
Lake	0	0	2	0	0
Lawrence	1	0	0	5	1
Licking	16	0	0	3	1
Logan	6	1	0	0	1
Lorain	0	1	7	0	0
Lucas	0	8	0	0	0
Madison	6	0	0	1	0
Mahoning	0	0	8	0	0
Marion	6	2	0	0	0
Medina	0	0	9	1	0

All counties visited or planned for a visit for hunting in Ohio in 2022. (Multiple Responses Allowed) (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Meigs	1	0	0	11	1
Mercer	0	0	0	0	4
Miami	0	0	0	0	6
Monroe	1	1	5	5	0
Montgomery	0	0	0	0	6
Morgan	1	1	2	7	2
Morrow	5	2	0	1	0
Muskingum	6	1	5	10	2
Noble	3	1	3	7	0
Ottawa	0	8	1	1	0
Paulding	0	4	0	0	0
Perry	7	1	0	9	0
Pickaway	6	0	0	1	0
Pike	2	0	0	2	1
Portage	0	0	8	0	0
Preble	0	0	0	0	8
Putnam	0	7	0	0	0
Richland	4	13	1	0	0
Ross	6	0	1	12	4
Sandusky	0	6	1	0	0
Scioto	0	1	1	8	2
Seneca	0	11	0	0	0
Shelby	0	0	0	0	8
Stark	0	0	10	0	0
Summit	0	0	9	0	0
Trumbull	0	1	10	0	0
Tuscarawas	0	0	10	0	0
Union	8	0	0	0	0
Van Wert	0	2	0	0	0
Vinton	4	0	0	5	6
Warren	0	0	0	0	12
Washington	1	0	3	13	0
Wayne	1	0	5	1	0
Williams	0	6	1	0	0
Wood	0	7	0	0	0
Wyandot	1	8	0	0	0
Don't know	2	2	3	2	4



HUNTING EXPENDITURES (USED)

Three quarters of hunters only purchased new hunting equipment rather than used. District results are tabulated below the graph.

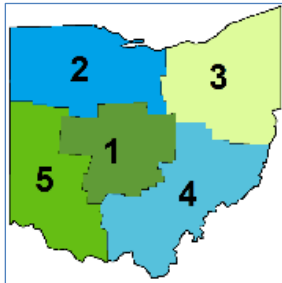


Did any proportion of your spending on hunting-related items in the following categories go toward the purchase of used items? (Multiple Response Allowed) (Hunters)

Percentages	District 1	District 2	District 3	District 4	District 5
Hunting equipment (firearms, ammunition, sights, decoys, calls, bows, archery equipment, etc.)	12	13	14	12	13
Auxiliary equipment for hunting (camping equipment, binoculars, field glasses, clothing, footwear, etc.)	7	7	4	4	6
Special equipment for hunting (motorized vehicles, boats, trailers, etc.)	4	4	5	5	4
No, I purchased only new hunting equipment	73	76	72	77	77
Don't know	10	7	11	7	7

The following table shows the mean percentages of total spending that went toward used items. This was a follow-up question to those who bought used items in each category, although the results below are shown out of all respondents. Hunters rarely bought used equipment.

What proportion of your annual hunting-related spending on [listed category] went toward the purchase of used items? (Asked of those who said that they spent in this category on used items; shown out of all respondents.) (Hunters)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Hunting equipment	4	4	5	5	3	4
Auxiliary equipment	1	2	2	1	0	2
Special equipment	3	1	2	3	4	2



HUNTING EXPENDITURES (ONLINE)

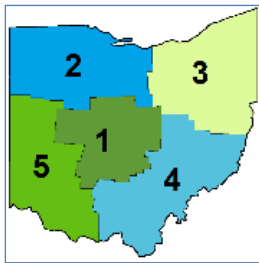
A majority of hunters (54%) did not spend anything through an online-only retailer or internet marketplace. Following the graph are the District results.



Were any of your hunting-related purchases in the following categories made through an online-only retailer or an or an internet marketplace? (Multiple Response Allowed) (Hunters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Hunting equipment (firearms, ammunition, sights, decoys, calls, bows, archery equipment, etc.)	33	25	30	30	22
Auxiliary equipment for hunting (camping equipment, binoculars, field glasses, clothing, footwear, etc.)	23	20	25	21	23
Special equipment for hunting (motorized vehicles, boats, trailers, etc.)	4	2	2	4	5
No, I didn't purchase any hunting items through an online-only retailer	47	59	51	57	61
Don't know	8	6	7	4	6

The table below shows the mean percentages of total spending that was done online. As with the previous section on used equipment purchases, this was a follow-up question to those who purchased items online, although the results below are shown out of all respondents.

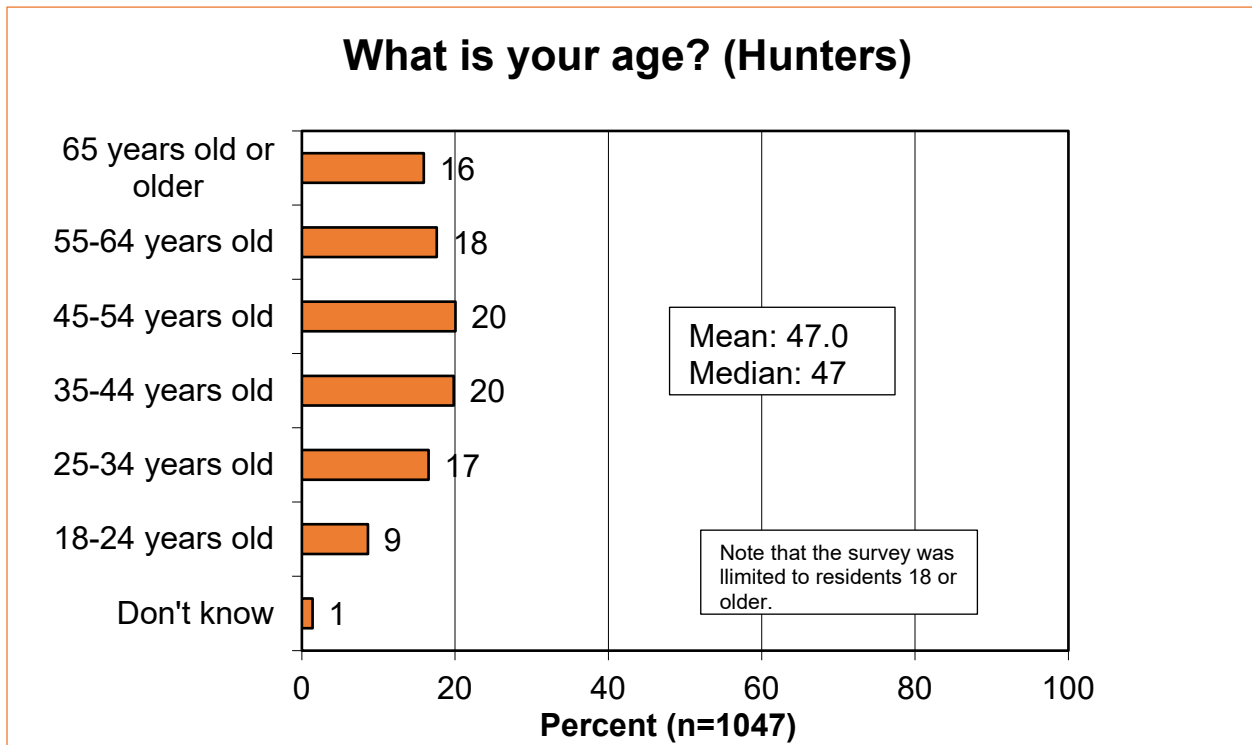
What proportion of your annual hunting-related spending on [listed category] went toward the purchase of items through an online-only retailer or an or an internet marketplace? (Asked of those who said that they spent in this category online; shown out of all respondents.) (Hunters)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Hunting equipment	12	15	10	13	13	8
Auxiliary equipment	11	10	10	13	10	9
Special equipment	2	2	1	2	2	2



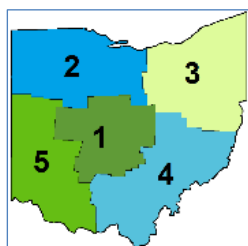
DEMOGRAPHIC CHARACTERISTICS

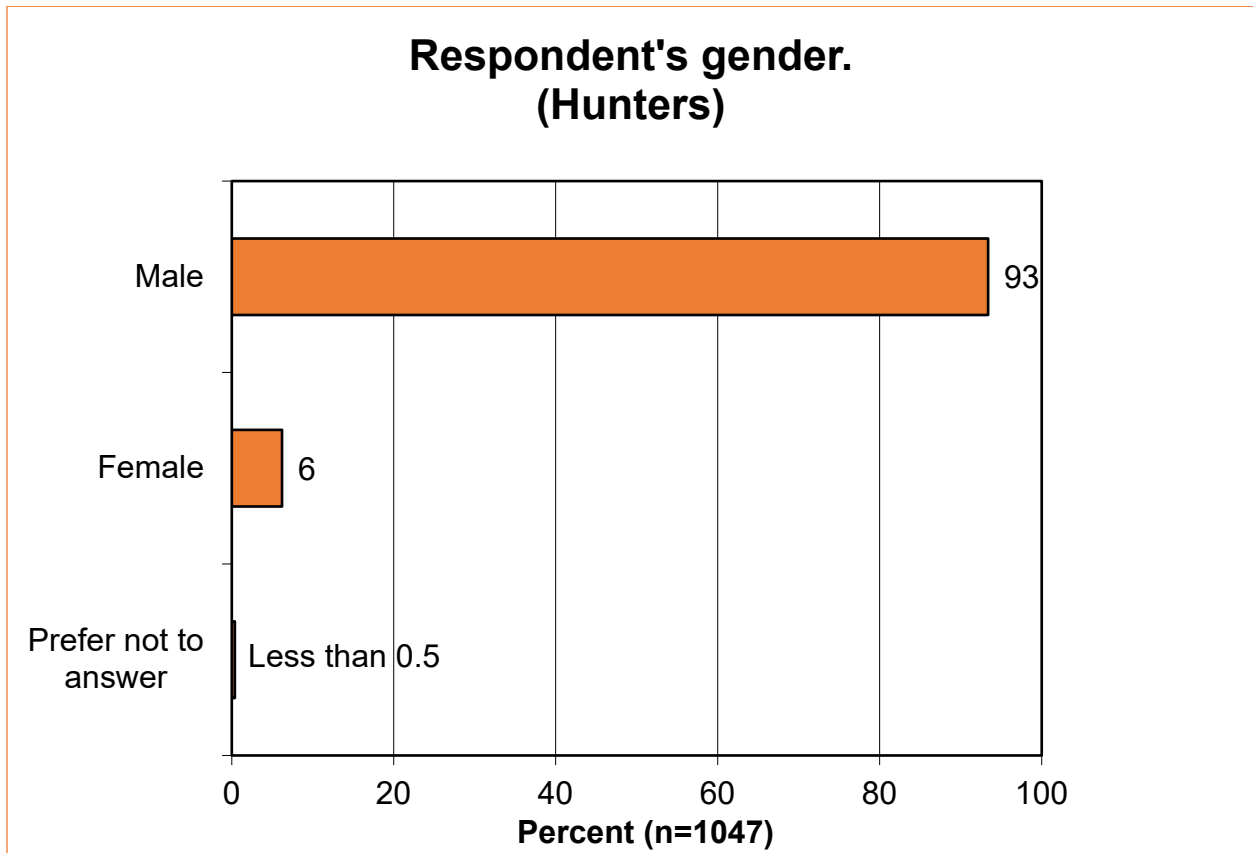
The survey gathered the following information:

- Age.
- Gender.
- Ethnicity.
- Residential area: urban to rural continuum.
- County of residence.

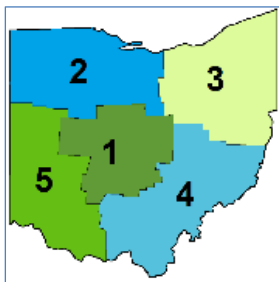


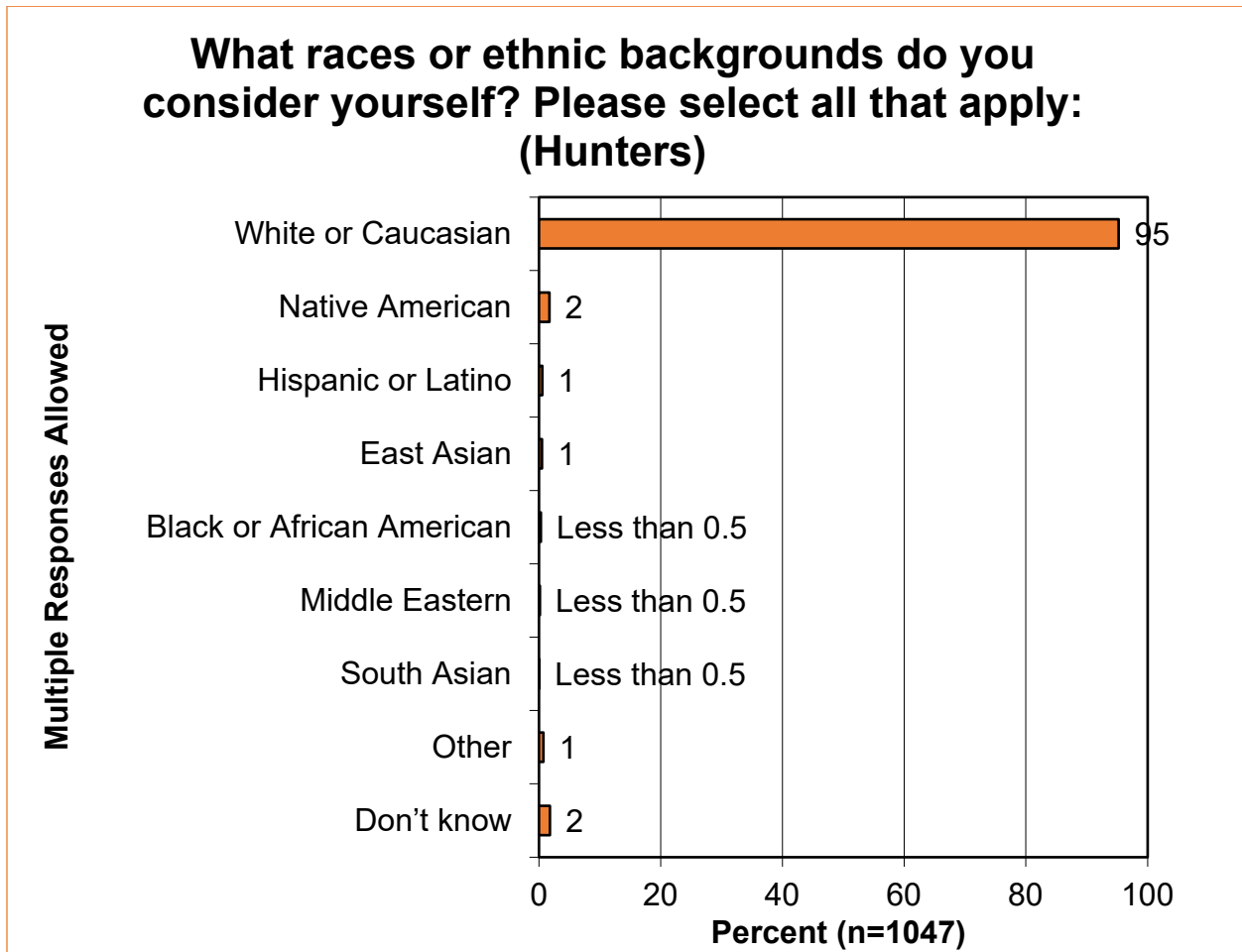
What is your age? (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
65 years old or older	14	15	19	15	14
55-64 years old	18	14	18	15	23
45-54 years old	17	22	17	26	23
35-44 years old	23	21	18	21	20
25-34 years old	19	18	18	16	11
18-24 years old	7	10	10	7	9
Don't know	2	2	1	1	1
Mean age	46.8	45.3	46.9	47.5	48.5
Median age	44	45	47	47	49



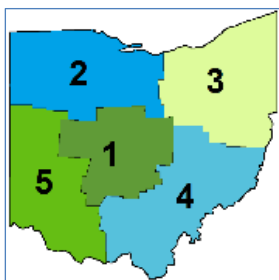


Respondent's gender. (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Male	95	94	93	89	96
Female	4	6	6	12	4
Prefer to self-describe	1	0	1	0	1

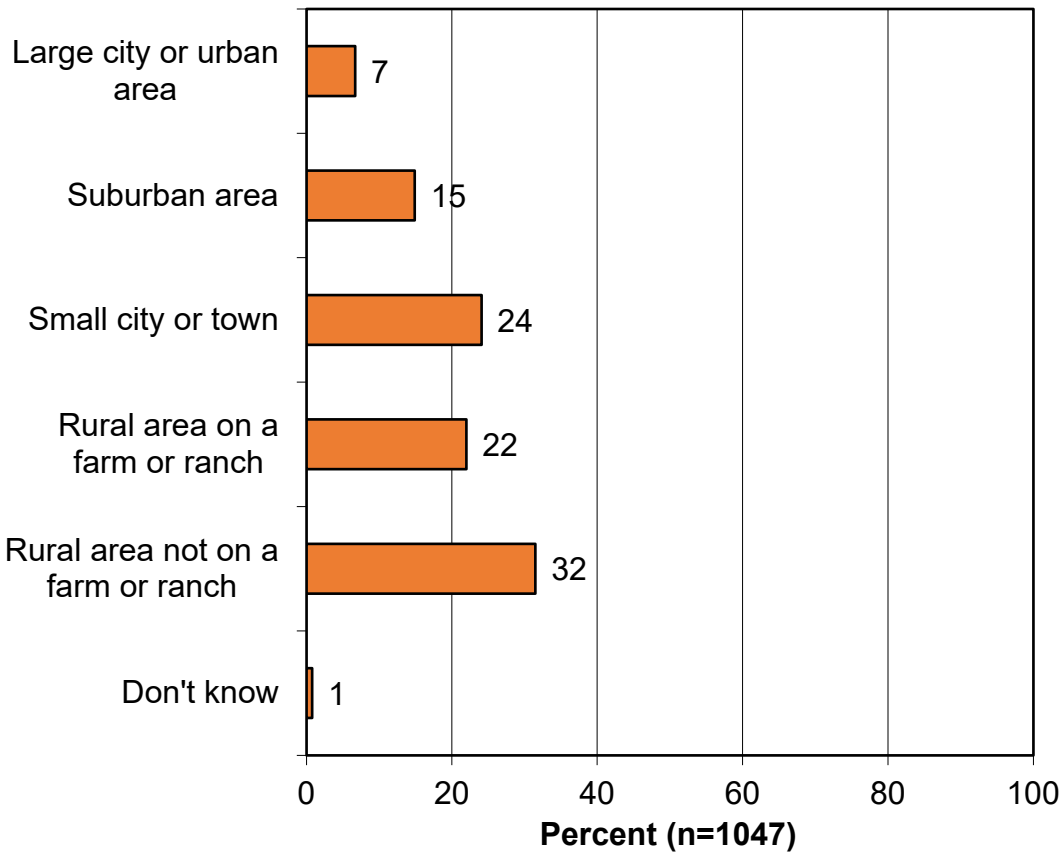




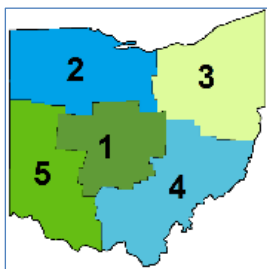
What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Multiple Responses Allowed) (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
White or Caucasian	94	94	95	98	96
Native American	1	1	2	2	1
Hispanic or Latino	0	1	1	0	0
East Asian	0	0	0	1	1
Black or African American	0	0	0	1	0
Middle Eastern	0	0	0	0	0
South Asian	0	0	0	0	0
Other	1	2	0	1	0
Don't know	2	2	2	1	1



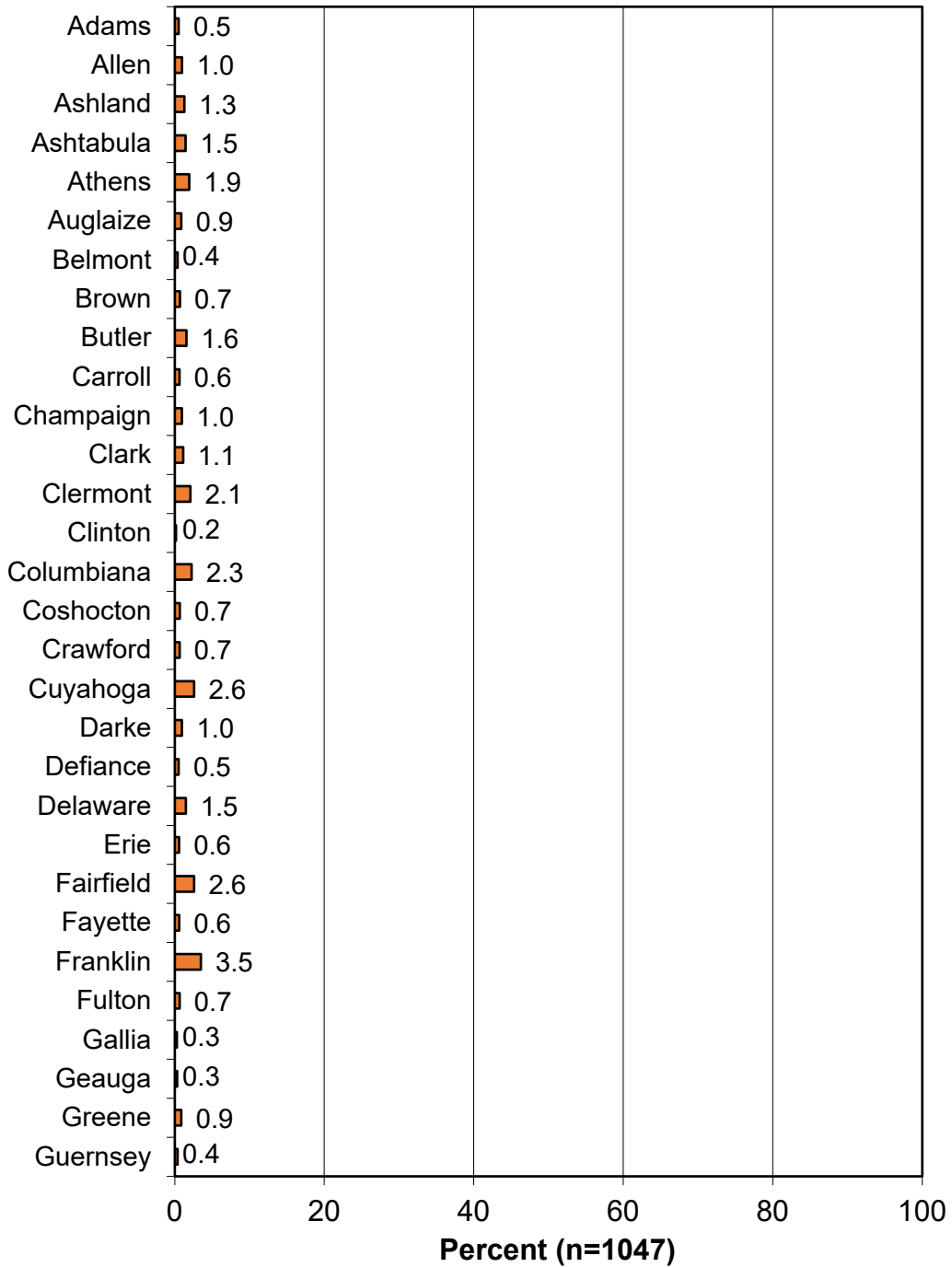
Which of the following do you consider your place of residence? (Hunters)



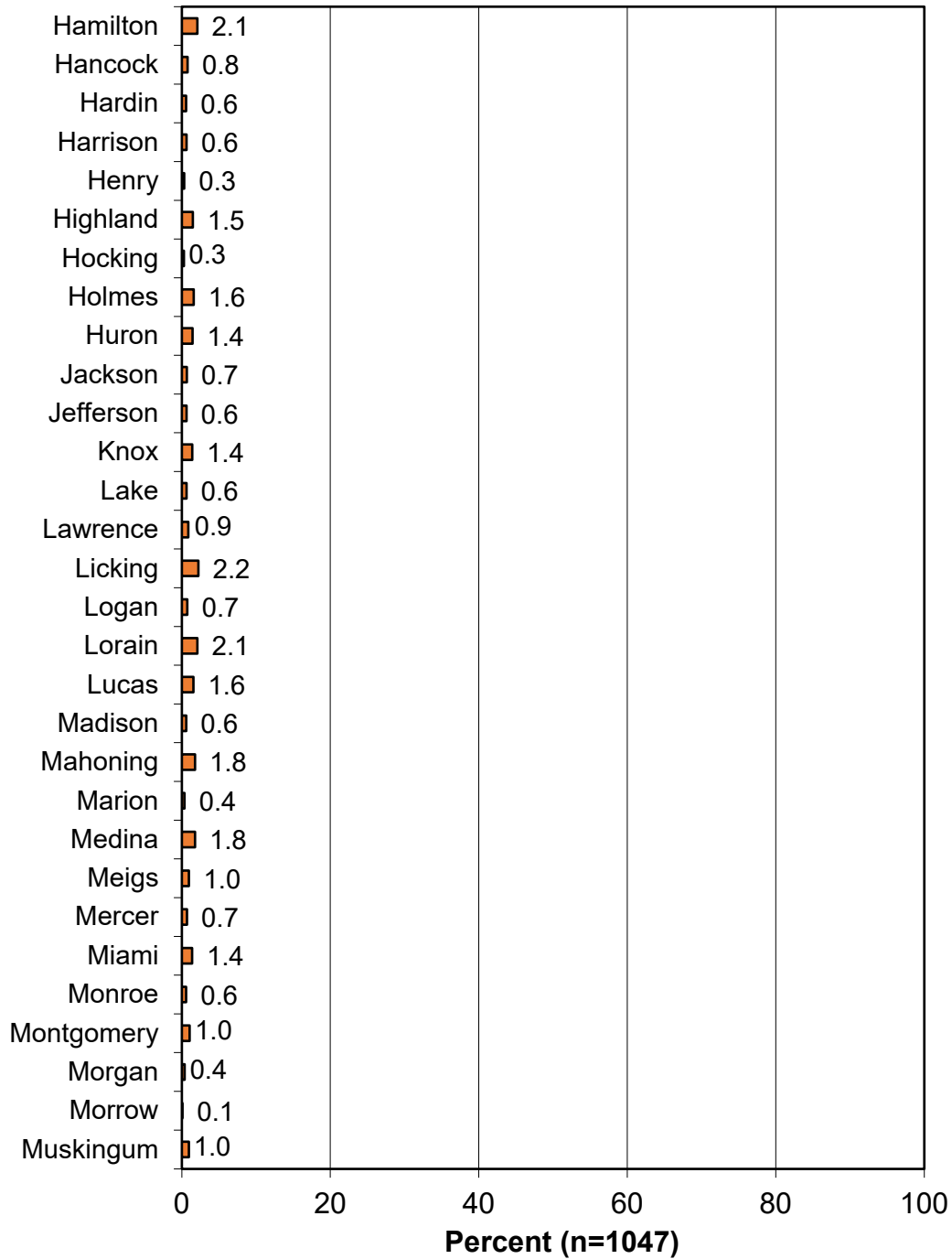
Which of the following do you consider your place of residence? (Hunters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Large city or urban area	11	4	8	2	7
Suburban area	18	7	22	3	17
Small city or town	19	29	25	26	21
Rural area on a farm or ranch	2	1	1	1	1
Rural area not on a farm or ranch	20	24	17	30	24
Don't know	30	35	27	39	31



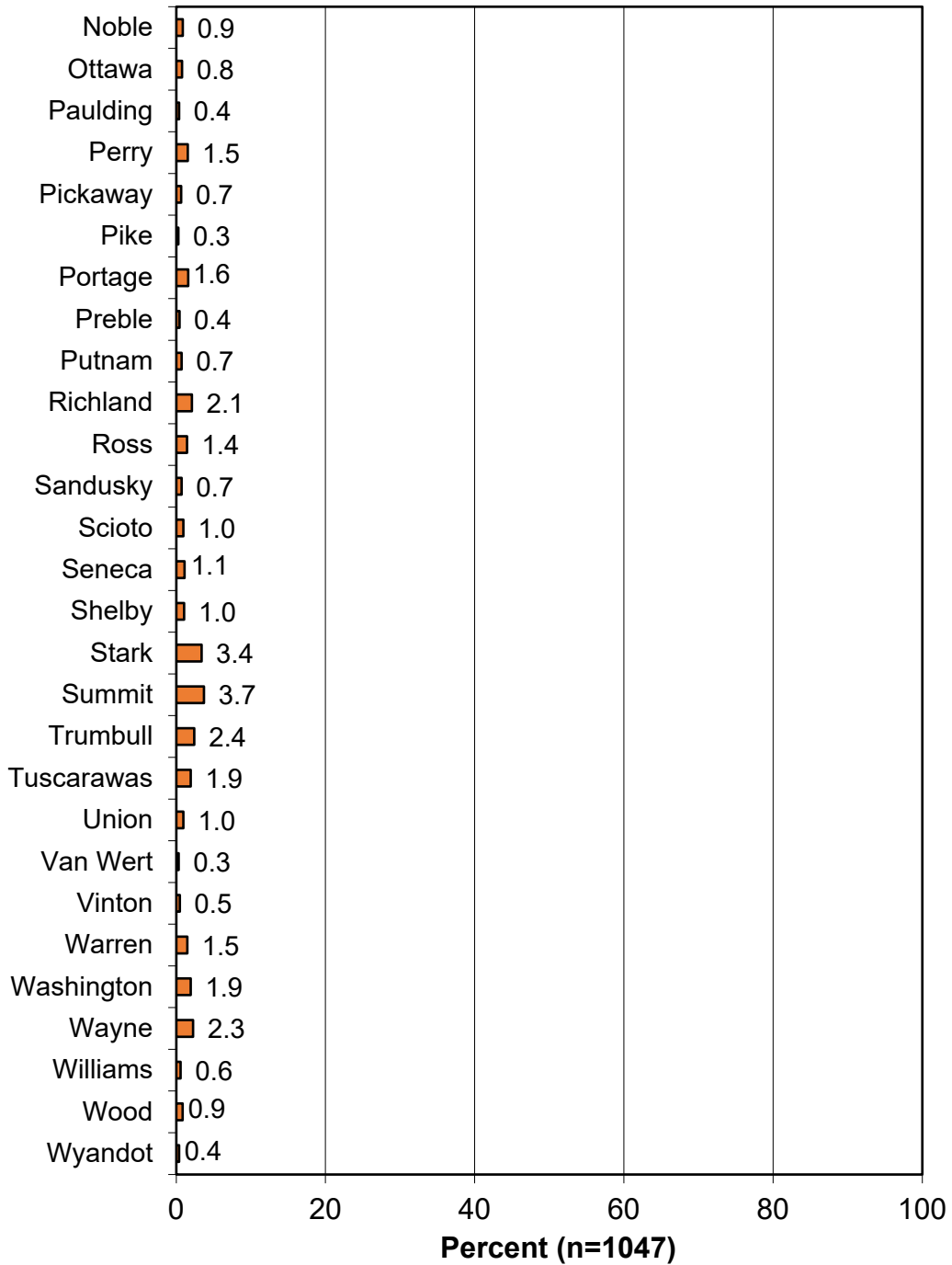
What county do you live in? (Part 1) (Hunters)



What county do you live in? (Part 2) (Hunters)



What county do you live in? (Part 3) (Hunters)



PARTICIPATION AND EXPENDITURE SURVEY OF ANGLERS

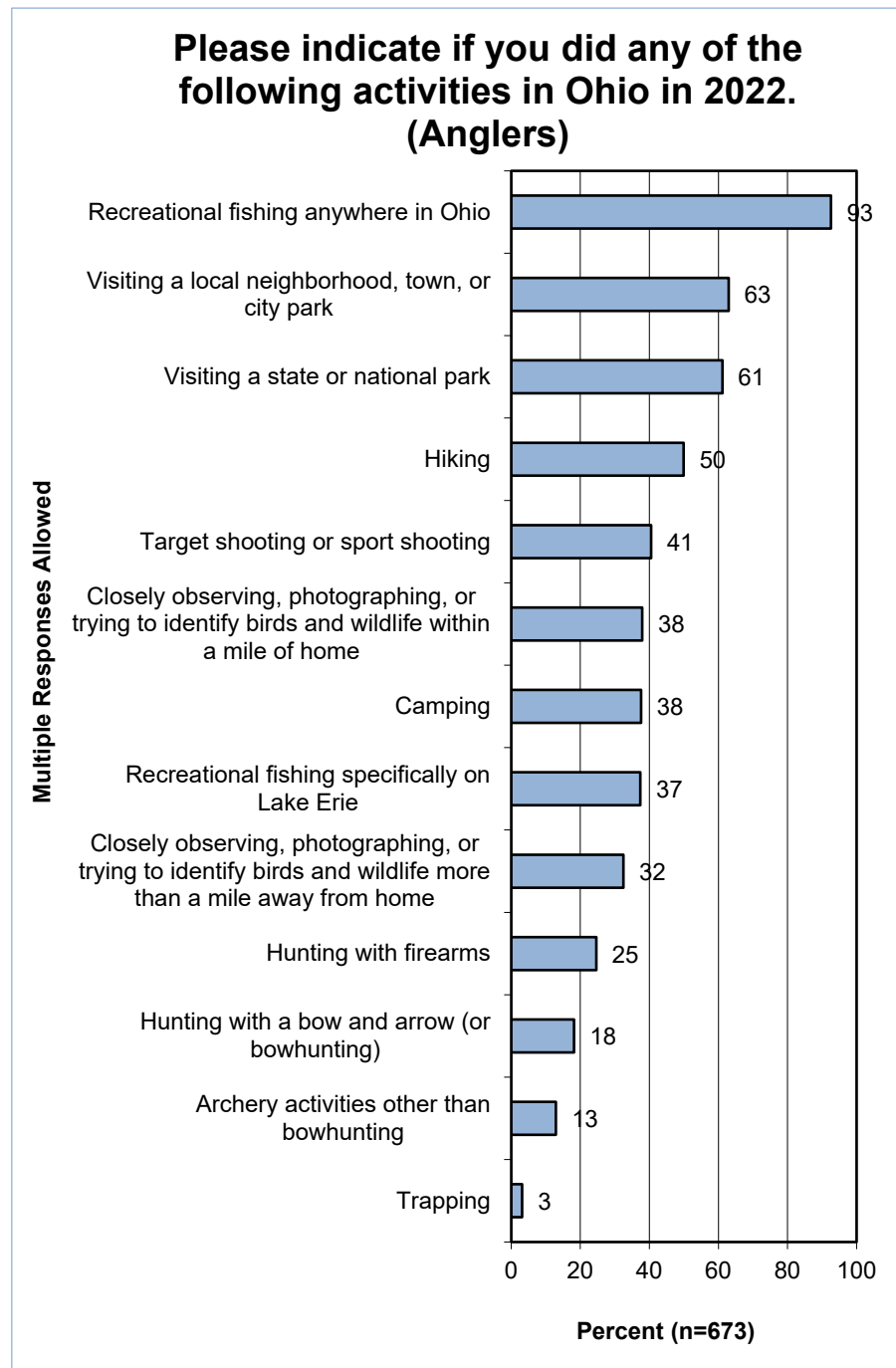
This section looks at anglers, consisting of those who went fishing in 2022 or who had spent money on fishing equipment. Participation in outdoor recreation in general by anglers is first examined before the report looks at fishing itself. The section discusses equipment used and locations of fishing, as well as expenditures. The section ends with demographic analyses of anglers.

PARTICIPATION IN OUTDOOR RECREATION

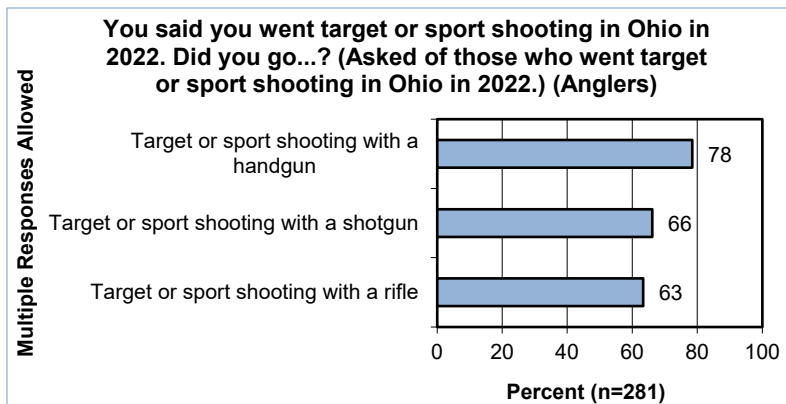
Other than fishing, the most popular activities among anglers in Ohio are visiting a local park or a state/national park. Hiking also was a quite common activity among anglers.

Note that a requirement of being surveyed in the fishing survey is participating in fishing in the state or in Lake Erie or spending money on fishing equipment.

Among anglers, most had fished somewhere in Ohio, and 37% had fished in Lake Erie. District results are shown on the next page.

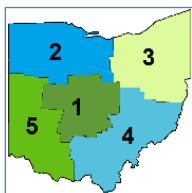


Please indicate if you did any of the following activities in Ohio in 2022: (Multiple Responses Allowed) (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Recreational fishing anywhere in Ohio	93	93	91	95	92
Visiting a local neighborhood, town, or city park	63	62	64	66	49
Visiting a state or national park	61	66	60	60	67
Hiking	50	59	39	49	43
Target shooting or sport shooting	41	42	40	36	47
Closely observing, photographing, or trying to identify birds and wildlife within a mile of home	38	44	40	31	38
Camping	38	38	29	39	44
Recreational fishing specifically on Lake Erie	37	32	58	44	21
Closely observing, photographing, or trying to identify birds and wildlife more than a mile away from home	32	36	31	33	28
Hunting with firearms	25	24	24	20	41
Hunting with a bow and arrow (or bowhunting)	18	12	17	16	30
Archery activities other than bowhunting	13	13	9	10	18
Trapping	3	2	4	1	5



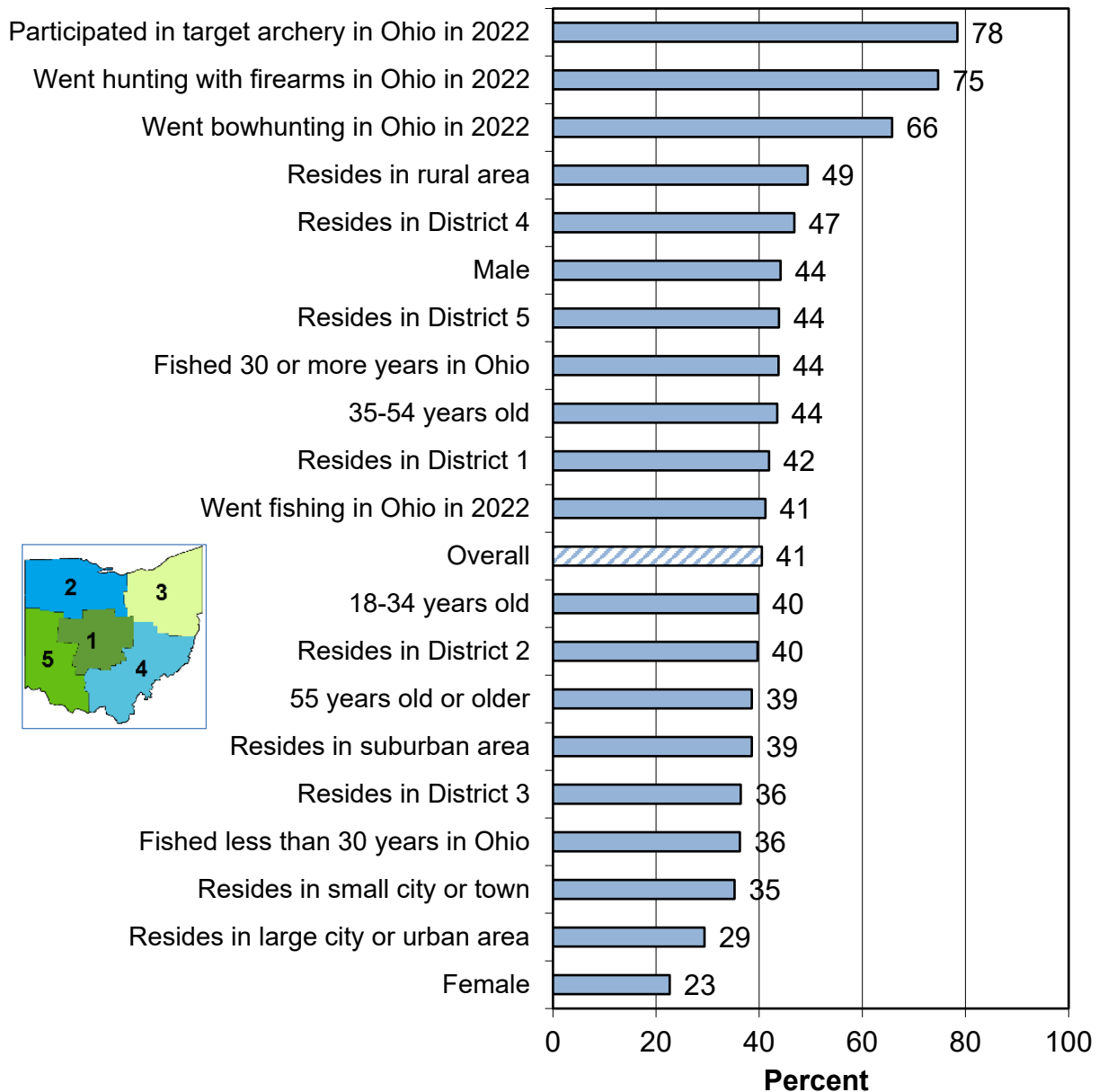
In follow-up to those who went sport shooting, the survey found that anglers who also shot mostly used handguns. District results are tabulated below.

You said you went target or sport shooting in Ohio in 2022. Did you go...? (Asked of those who went sport shooting in Ohio in in 2022.) (Multiple Responses Allowed) (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Target or sport shooting with a handgun	79	64	86	77	77
Target or sport shooting with a shotgun	74	74	63	59	63
Target or sport shooting with a rifle	63	62	65	65	61

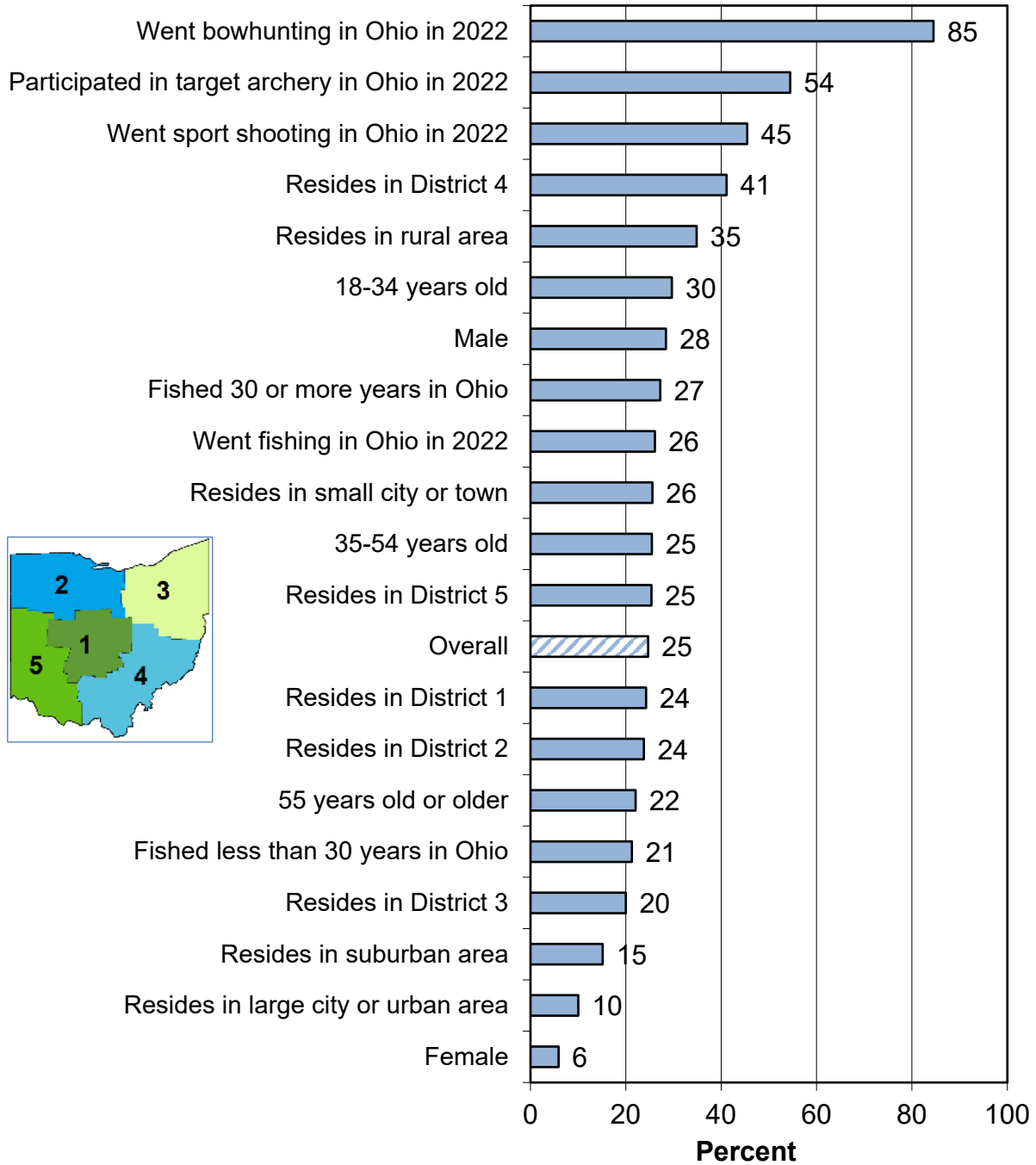


The demographic analyses graphs below and on the next pages show those angler groups most likely to also participate in sport shooting, hunting with firearms, bowhunting, and target archery.

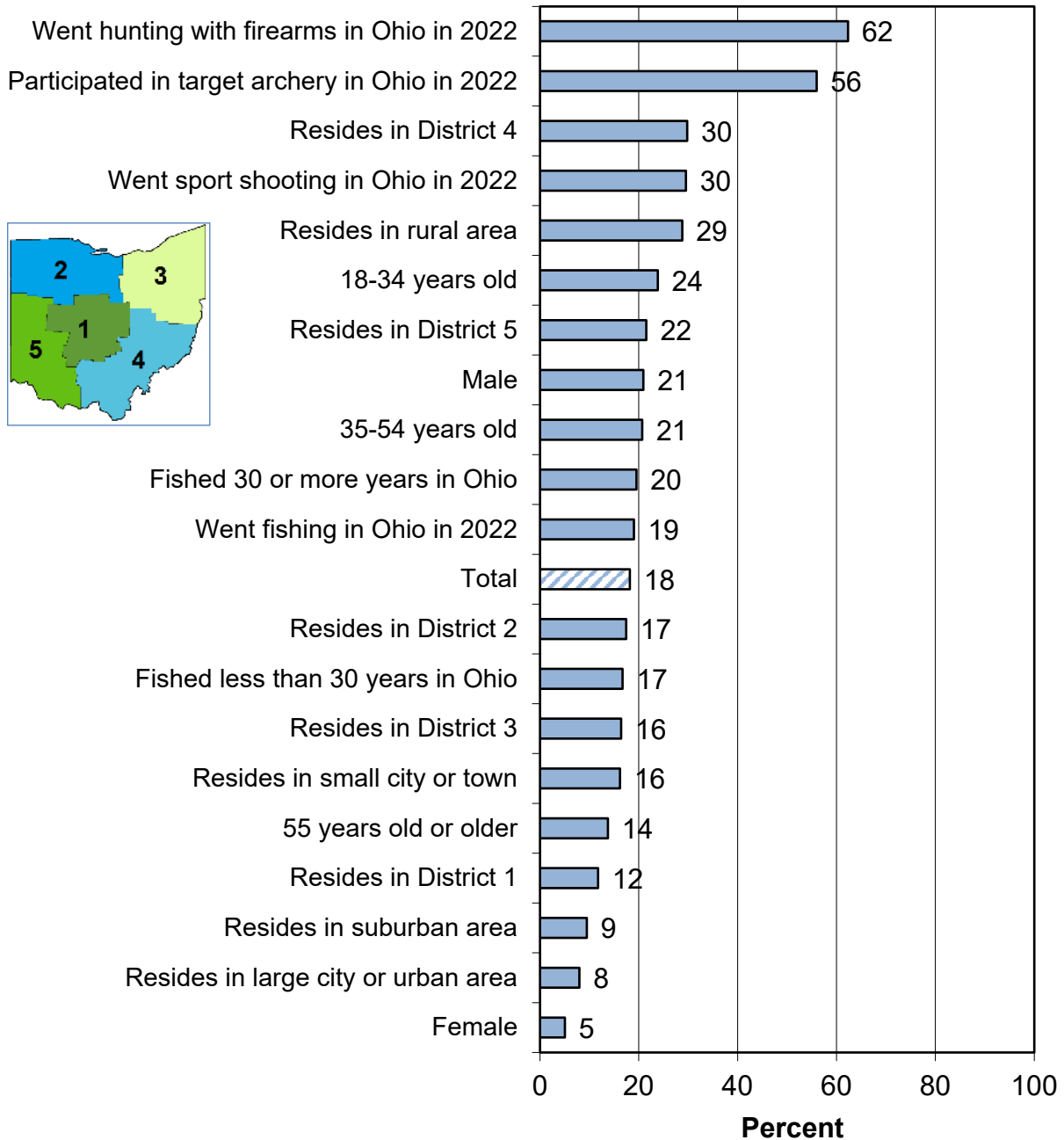
Percent of each of the following groups who went target or sport shooting in Ohio in 2022: (Anglers)



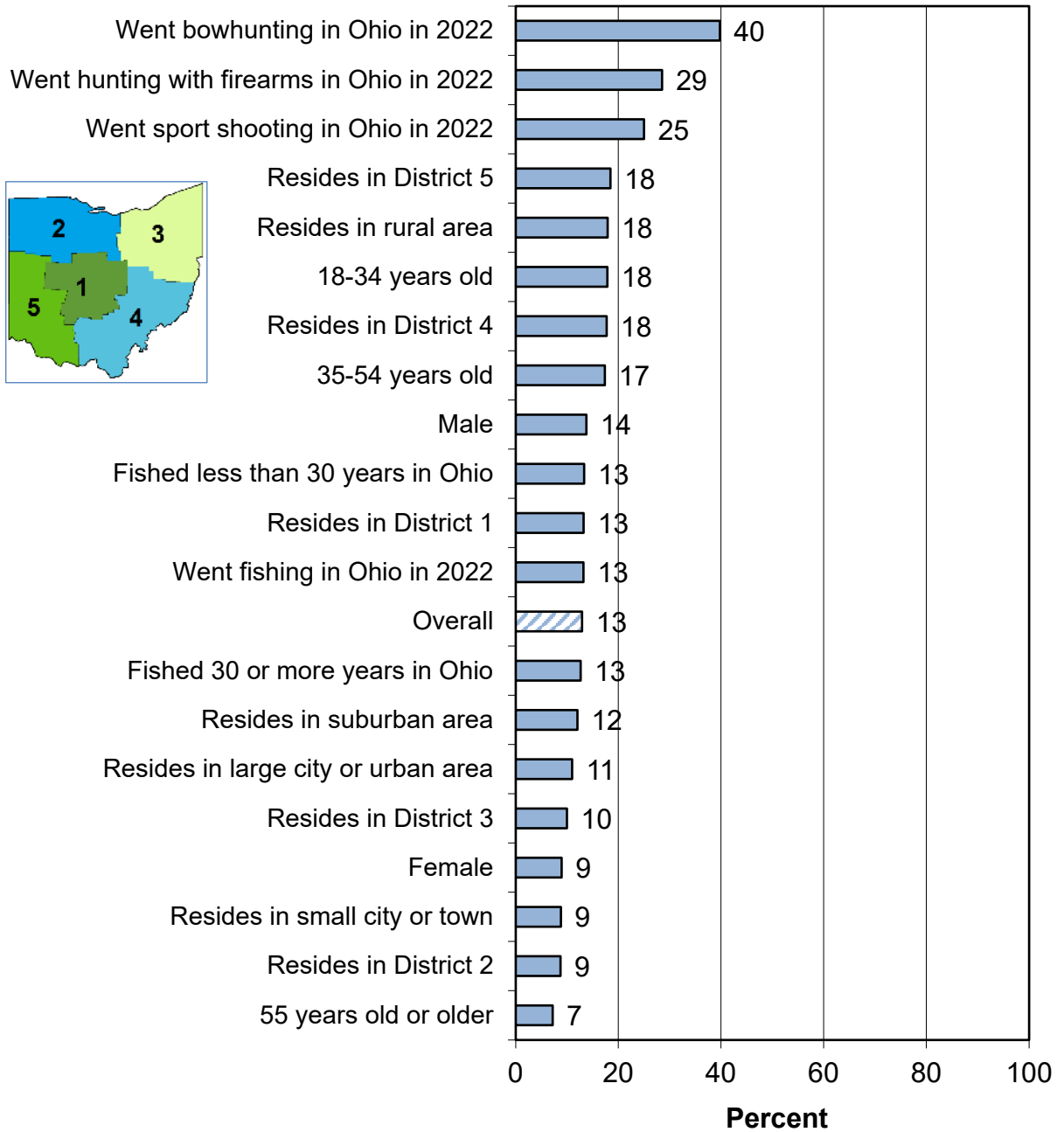
Percent of each of the following groups who went hunting with firearms in Ohio in 2022: (Anglers)



Percent of each of the following groups who went bowhunting in Ohio in 2022: (Anglers)

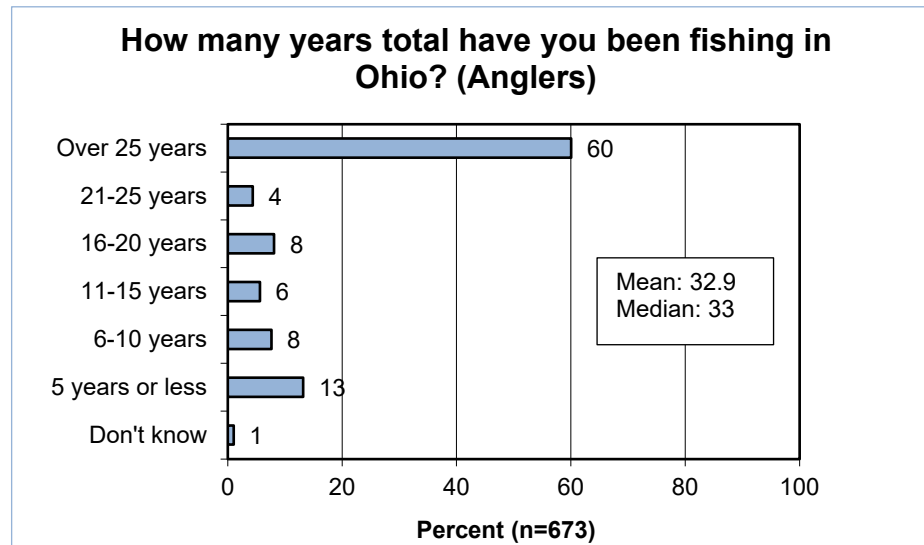


Percent of each of the following groups who participated in target archery in Ohio in 2022: (Anglers)

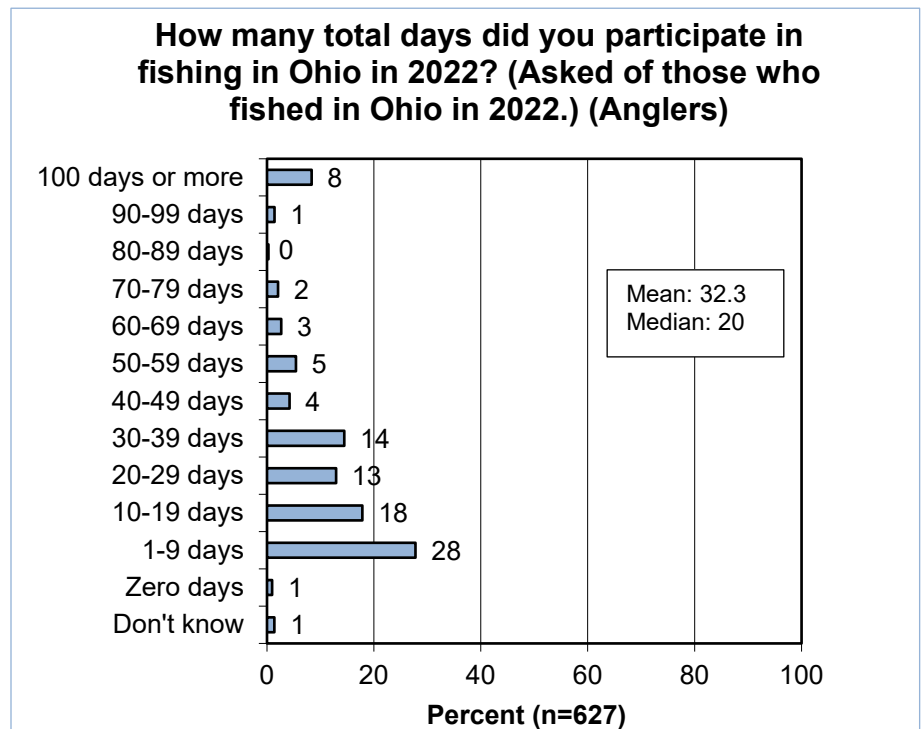


FISHING PARTICIPATION

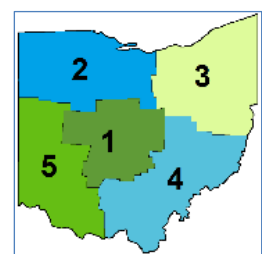
The majority of anglers had been fishing for quite some time: 60% have done so more than 25 years. The mean is 32.95 years, and the median is 33 years. The District results are shown below the graph.



How many years total have you been participating in fishing in Ohio? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Over 25 years	54	64	61	62	60
21-25 years	6	2	4	9	4
16-20 years	9	8	6	10	11
11-15 years	8	10	5	3	3
6-10 years	6	6	8	6	11
5 years or less	15	10	16	10	10
Don't know	2	1	1	1	2
Mean years	31.06	35.97	32.29	33.31	33.27
Median years	30	40	35	34	30

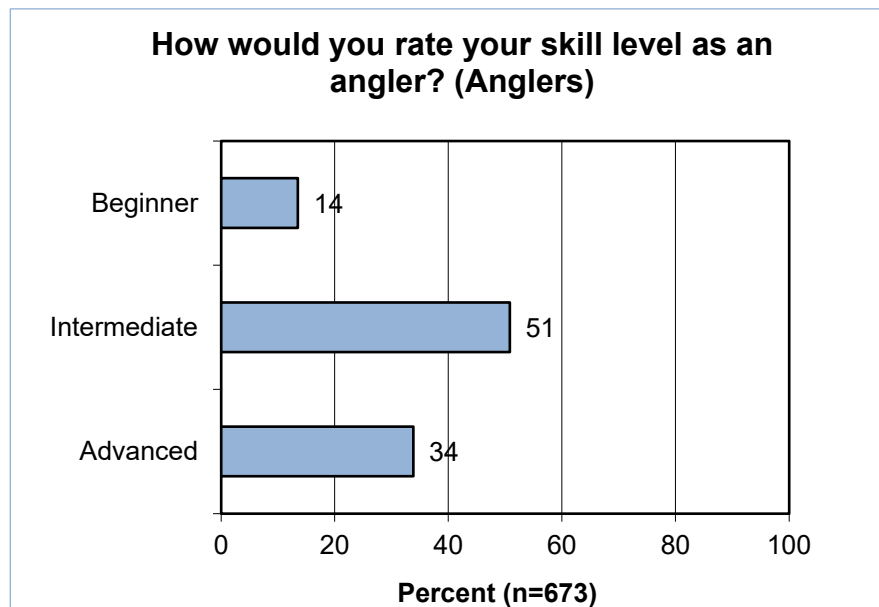
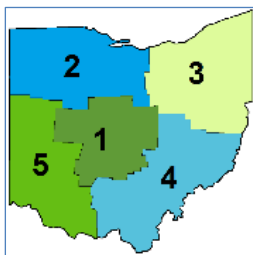


This graph shows the days of participation in fishing in Ohio in 2022. The mean is 32.26 days, while the median is 20 days. On the following page is the table of District results.



How many total days did you participate in fishing in Ohio in 2022? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
100 days or more	8	5	9	15	8
90-99 days	1	1	2	2	1
80-89 days	0	1	0	0	1
70-79 days	1	3	2	3	3
60-69 days	6	1	2	3	3
50-59 days	6	4	5	9	5
40-49 days	5	8	2	9	3
30-39 days	10	14	14	14	19
20-29 days	9	15	16	12	11
10-19 days	25	18	19	11	13
1-9 days	29	26	29	22	29
Don't know	1	3	1	0	1
Mean days	31.9	29.2	29.5	43.3	33.8
Median day	15	20	20	30	20

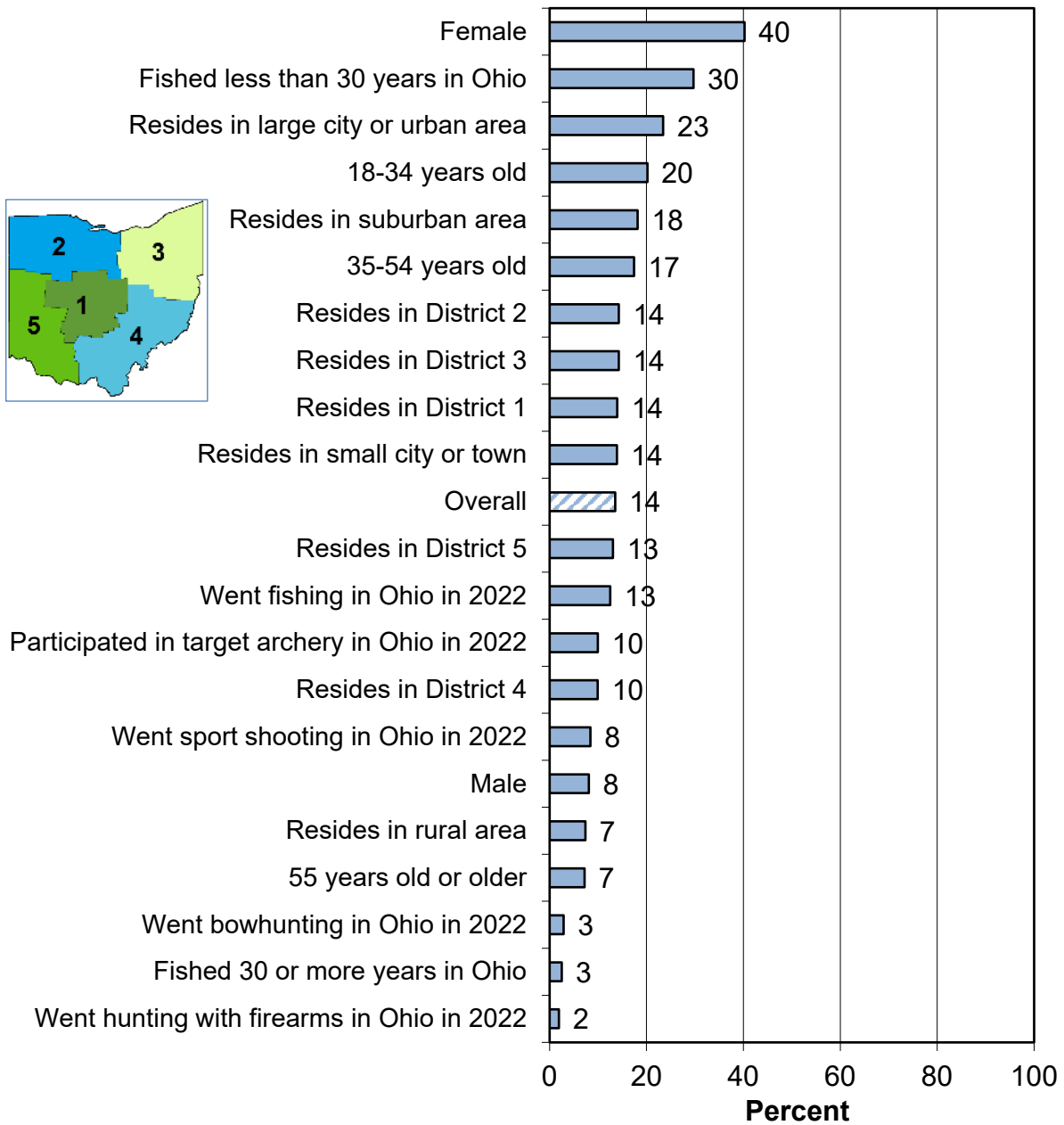
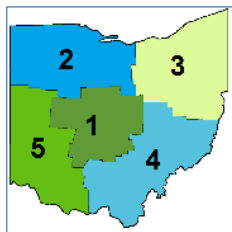
Self-professed levels of experience in fishing are shown. Most commonly, anglers rate themselves as intermediate, but about a third rate themselves as advanced.



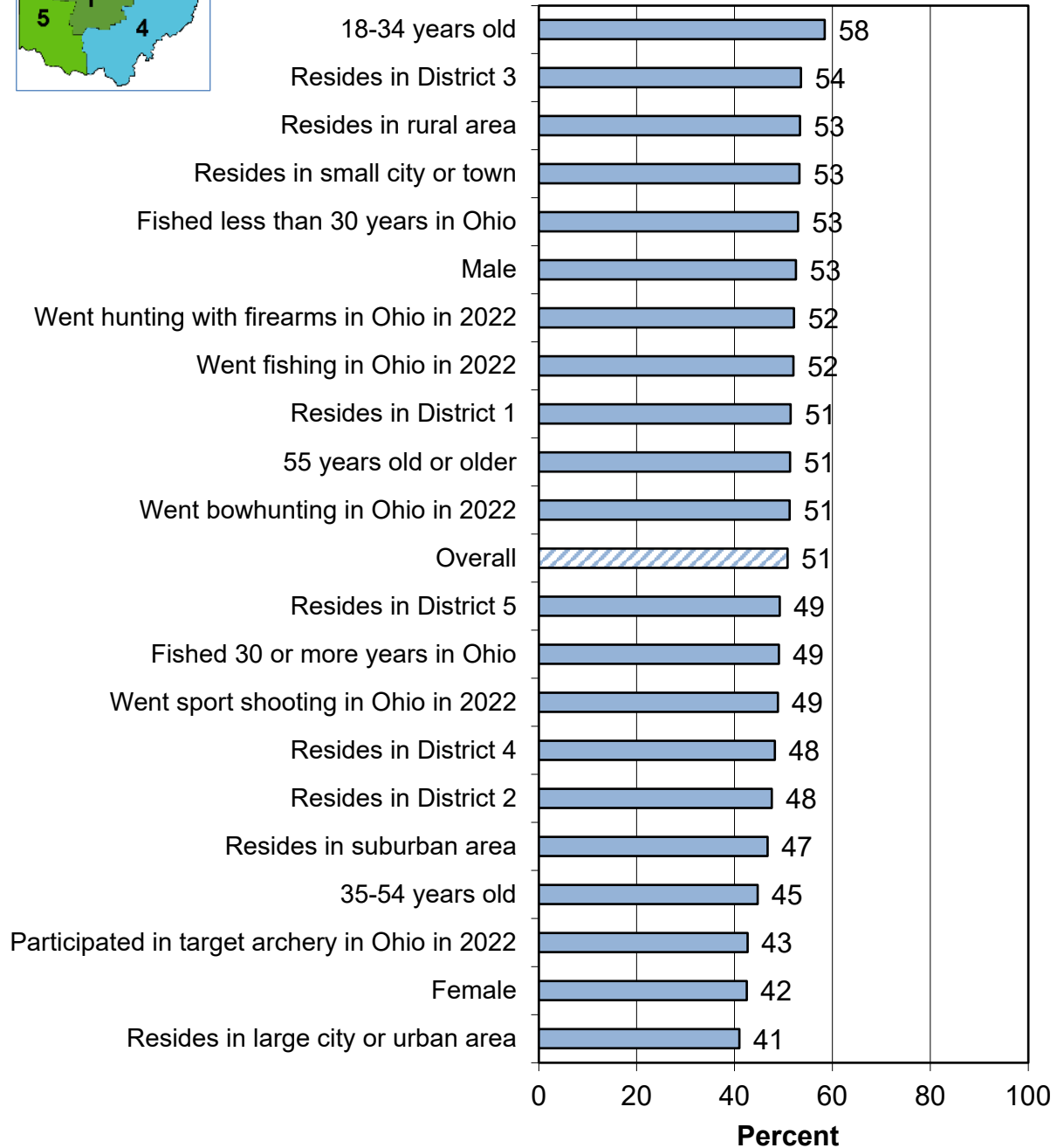
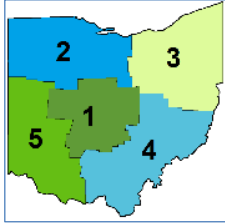
How would you rate your skill level as an angler? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Beginner	14	14	14	10	13
Intermediate	52	48	54	48	49
Advanced	32	37	30	41	36
Don't know	2	2	2	1	2

Demographic analyses graphs show the angler groups most likely to rate their skill levels as beginner (below), intermediate (next page), or advanced (two pages hence).

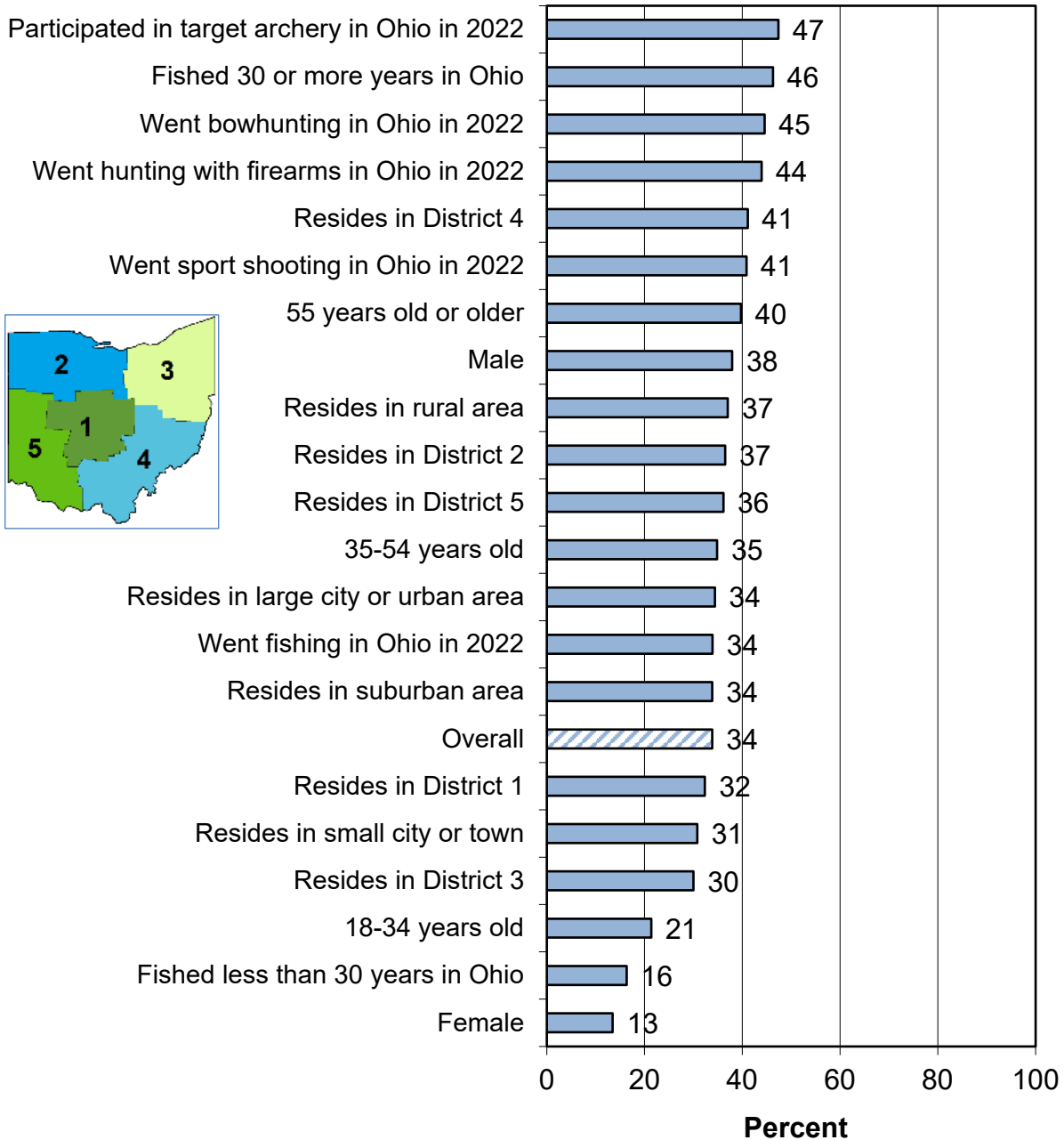
Percent of each of the following groups who rate their fishing skill level as beginner: (Anglers)



Percent of each of the following groups who rate their fishing skill level as intermediate: (Anglers)

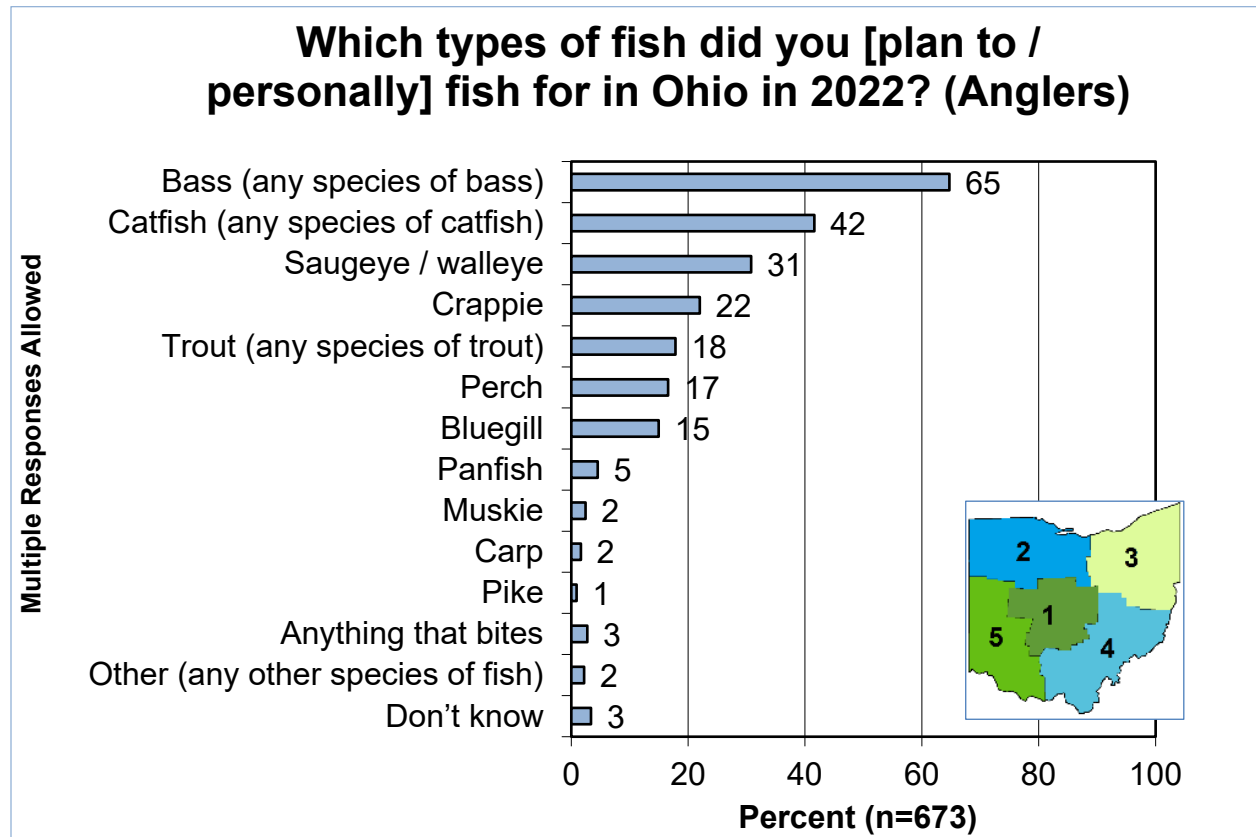


Percent of each of the following groups who rate their fishing skill level as advanced: (Anglers)



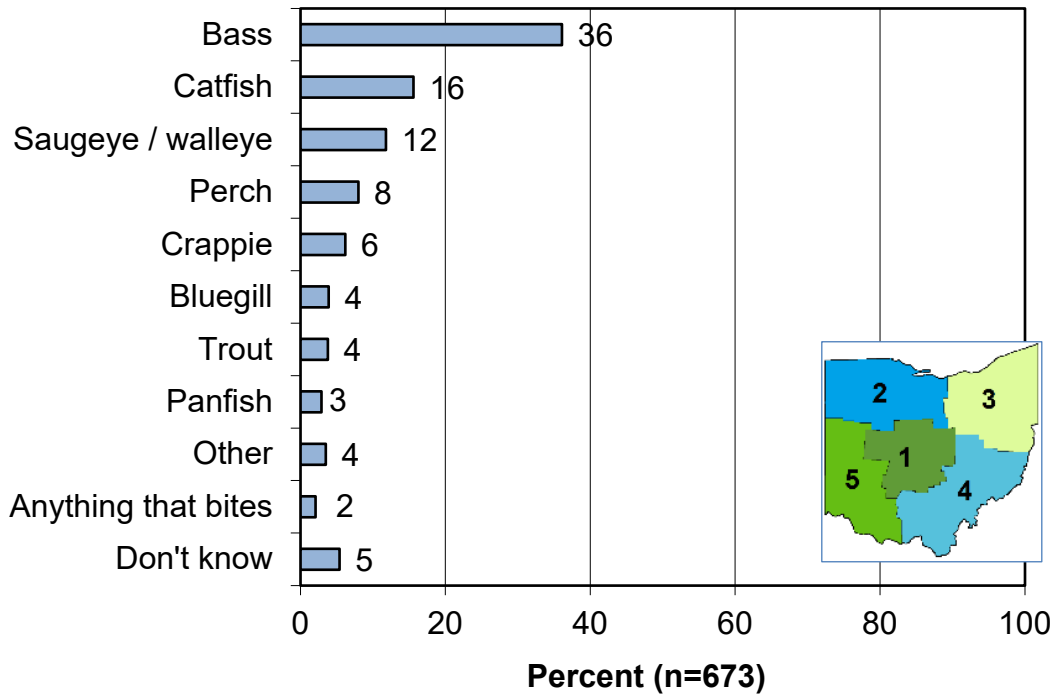
SPECIES FISHED AND TYPES OF FISHING

The next two sets of graphs/tables show species fished. Bass is the leading type of fish that anglers fish for in Ohio, followed by catfish and saugeye/walleye. The second species question asked about the single species that anglers fished for the most. In that graph, the top three species are the same as the graph below, while the species immediately under those three (crappie, trout, perch, and bluegill) change ranking from one graph to the next. District results are presented in the table under the graphs.



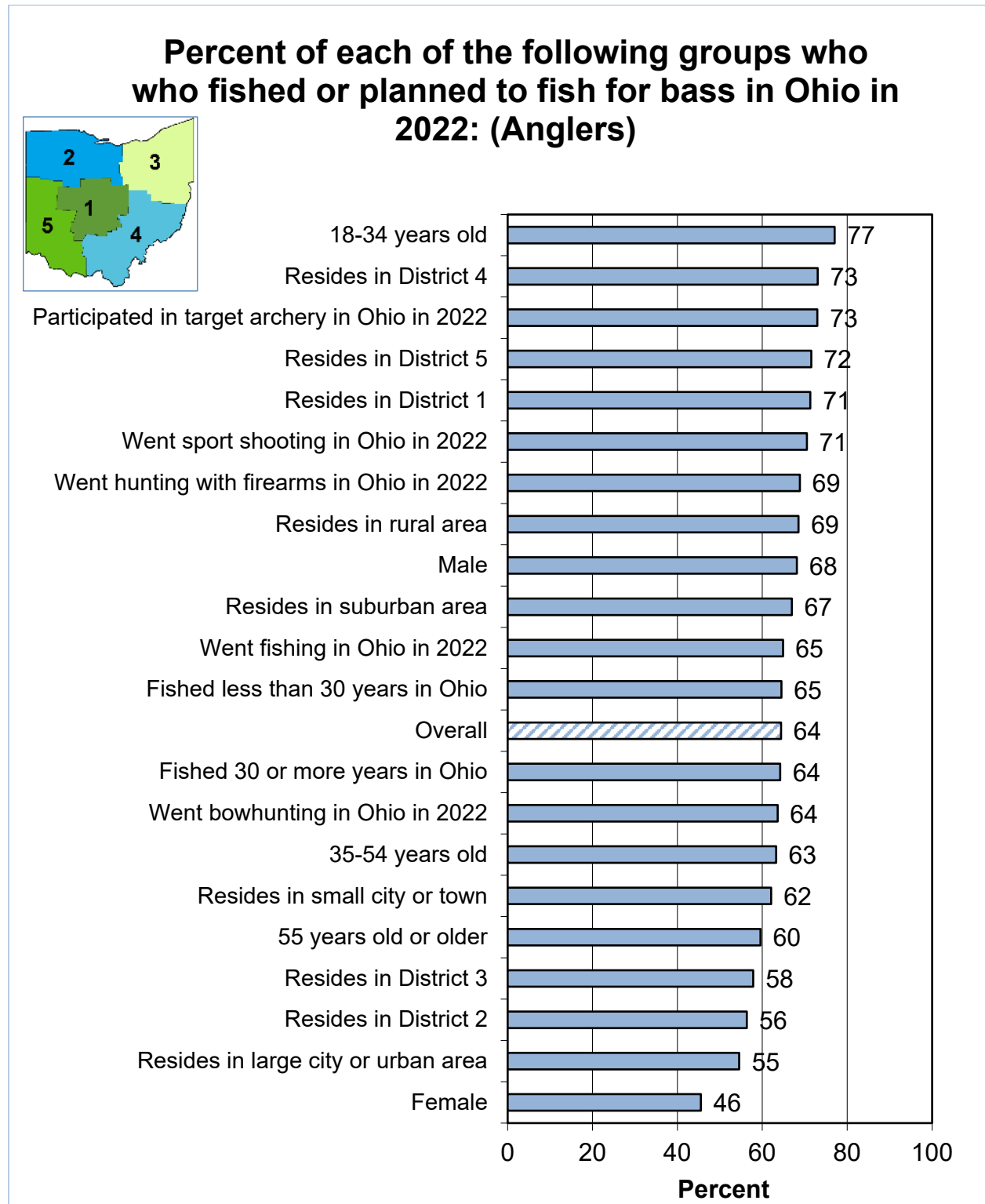
Percentages	District 1	District 2	District 3	District 4	District 5
Bass (any species of bass)	72	56	58	73	72
Catfish (any species of catfish)	46	39	31	55	52
Saugeye / walleye	30	39	36	24	20
Crappie	26	10	19	23	34
Trout (any species of trout)	14	11	25	18	14
Perch	14	36	18	6	8
Bluegill	13	17	9	21	23
Panfish	4	5	4	4	5
Muskie	1	1	4	1	3
Carp	1	2	2	2	1
Pike	1	1	1	1	2
Anything that bites	1	2	5	3	1
Other (any other species of fish)	1	2	3	1	2
Don't know	4	1	4	1	4

Which of those types of fish did you [plan to / personally] fish most often in Ohio in 2022? (Anglers)

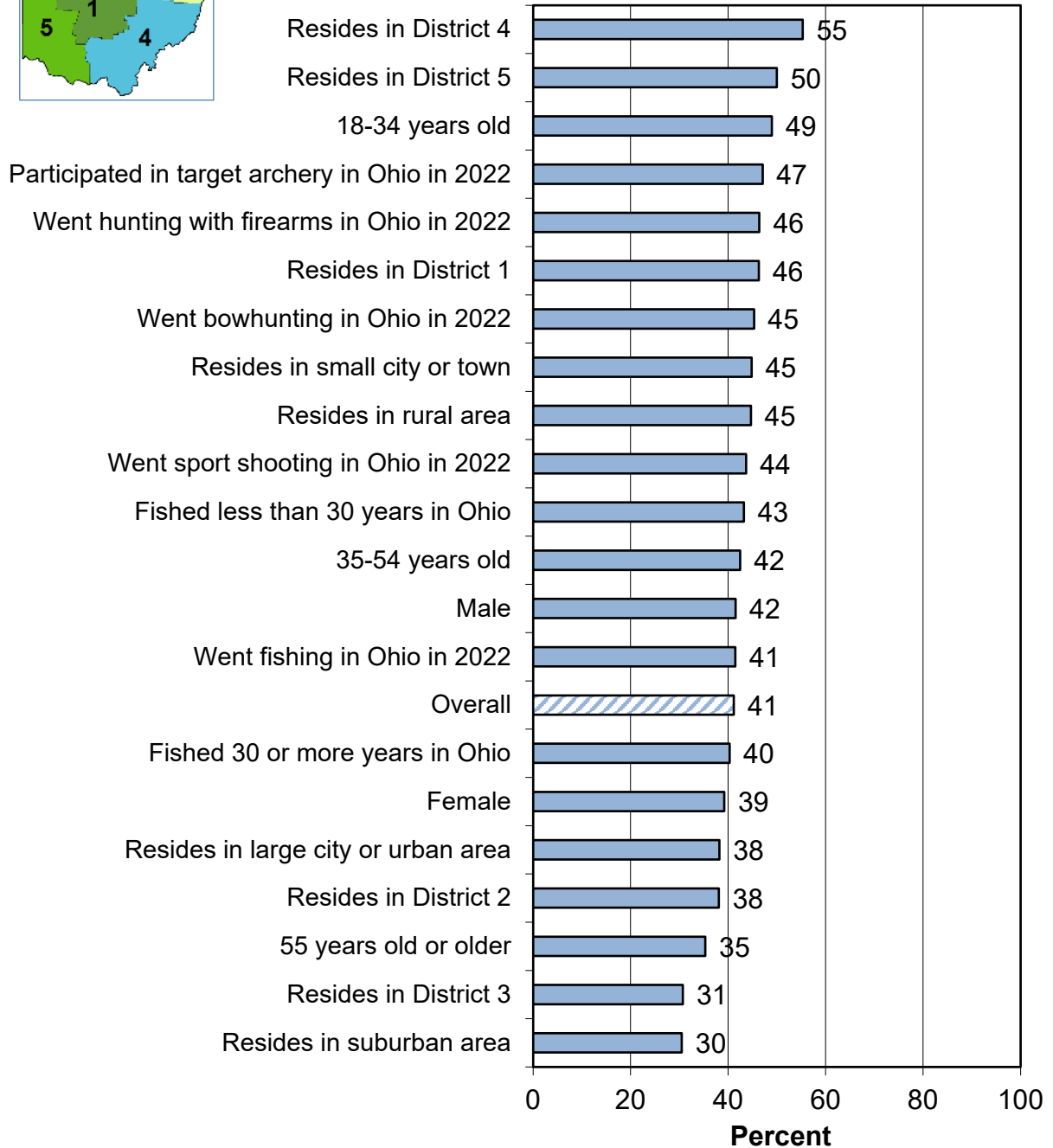
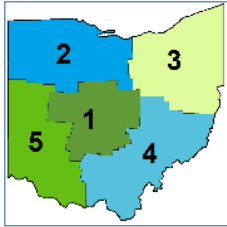


Which of those types of fish did you [plan to / personally] fish most often in Ohio in 2022? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Bass	40	33	34	41	35
Catfish	16	11	11	24	22
Saugeye / walleye	11	12	16	10	5
Perch	7	22	9	1	1
Crappie	7	2	4	7	13
Bluegill	3	6	3	6	5
Trout	2	2	6	1	4
Panfish	2	2	3	3	4
Muskie	0	0	1	0	1
Sunfish	0	0	0	0	1
Carp	0	0	0	1	0
Anything that bites	2	2	2	2	3
Other	2	7	4	2	2
Don't know	7	2	7	2	5

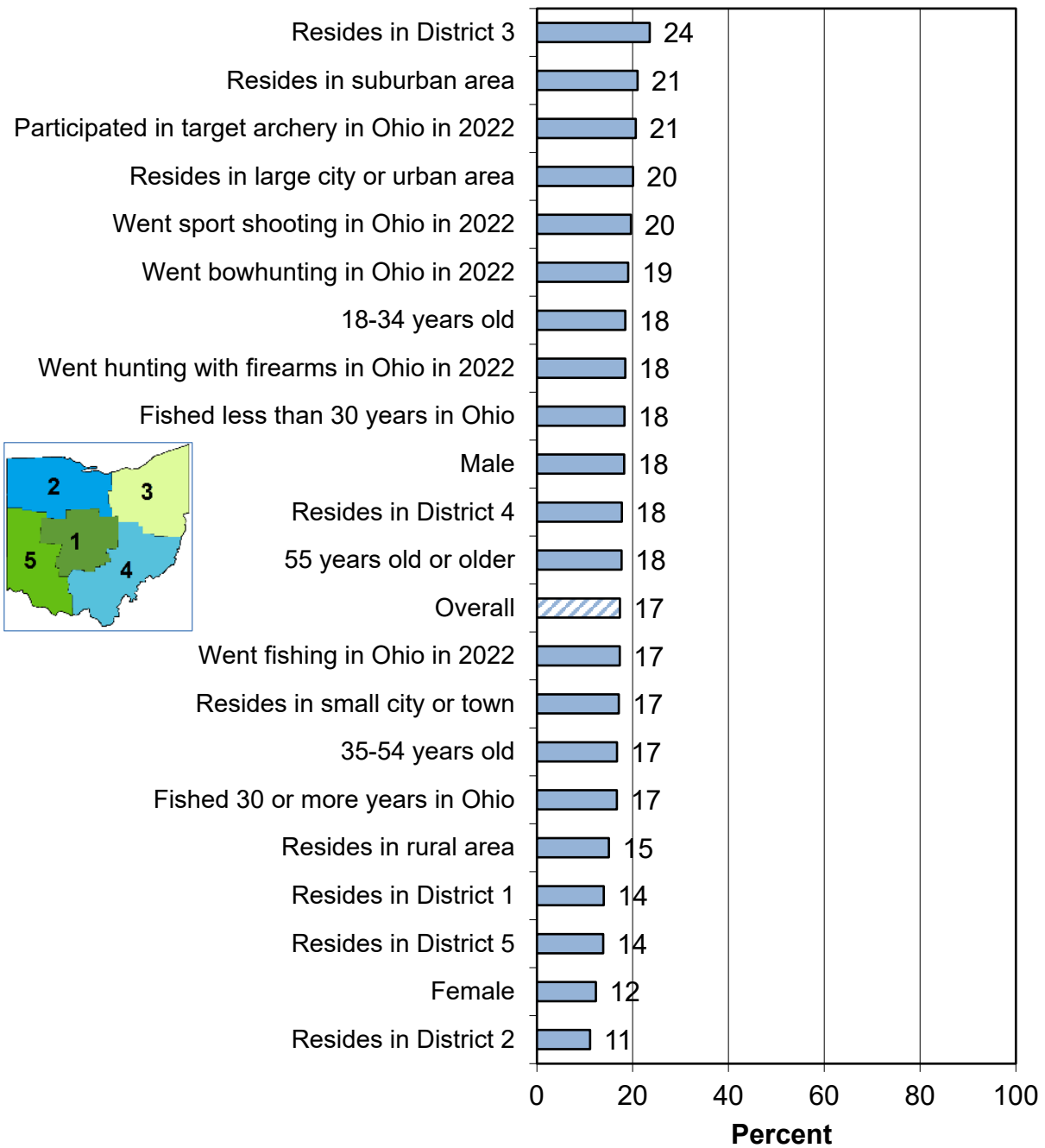
Three demographic analyses graphs show those angler groups most likely to fish for bass, catfish, and trout.

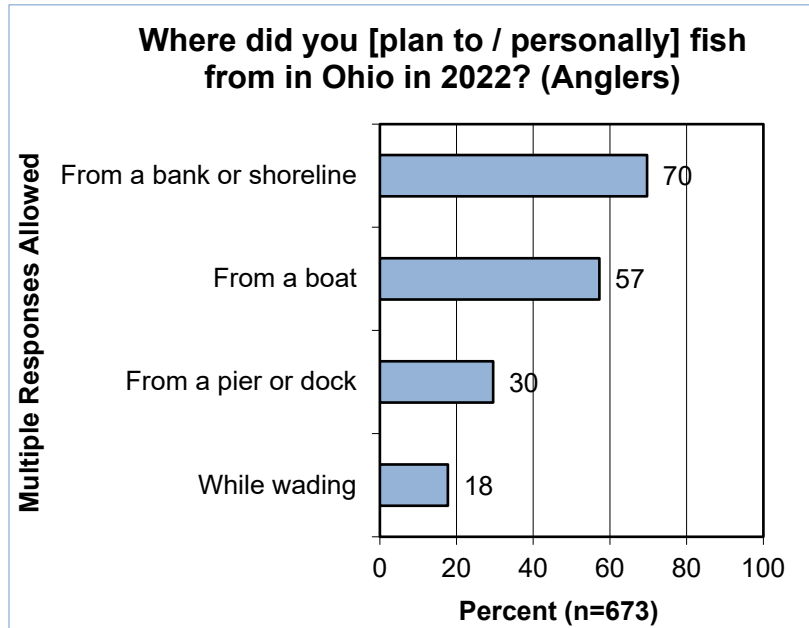


Percent of each of the following groups who who fished or planned to fish for catfish in Ohio in 2022: (Anglers)



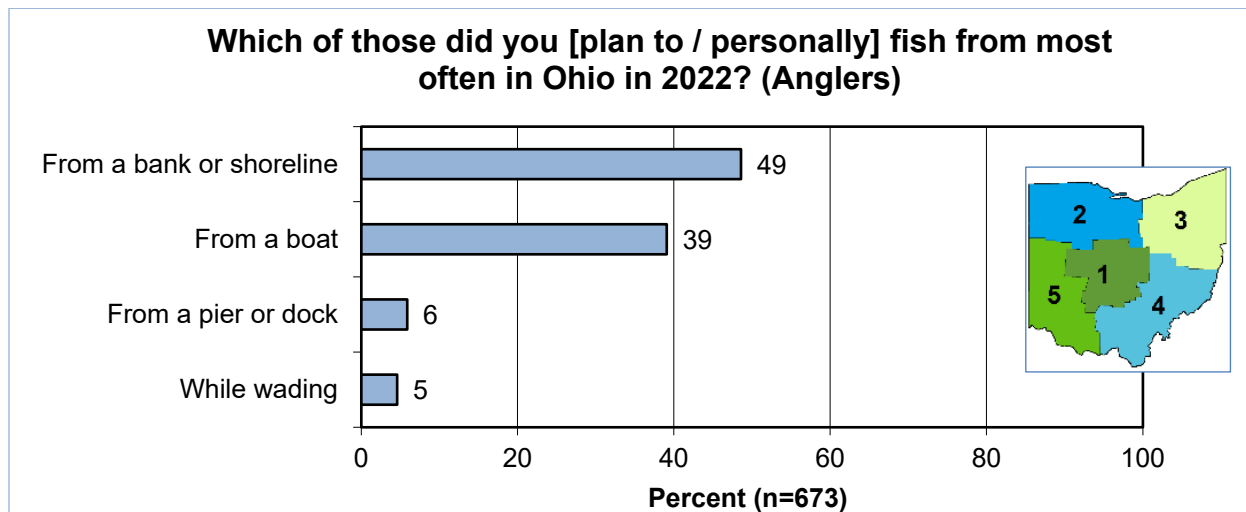
Percent of each of the following groups who fished or planned to fish for trout in Ohio in 2022: (Anglers)





The survey asked anglers about the type of fishing that they did (or planned to do) vis-à-vis from a boat, from the bank, or from a pier or dock. Fishing from a bank or shoreline is the most popular by far, done by almost three quarters. Nonetheless, more than half fish from a boat at least some of the time. The survey then asked about the type of fishing they did or would do the most, as shown in the graph and table at the bottom of the page.

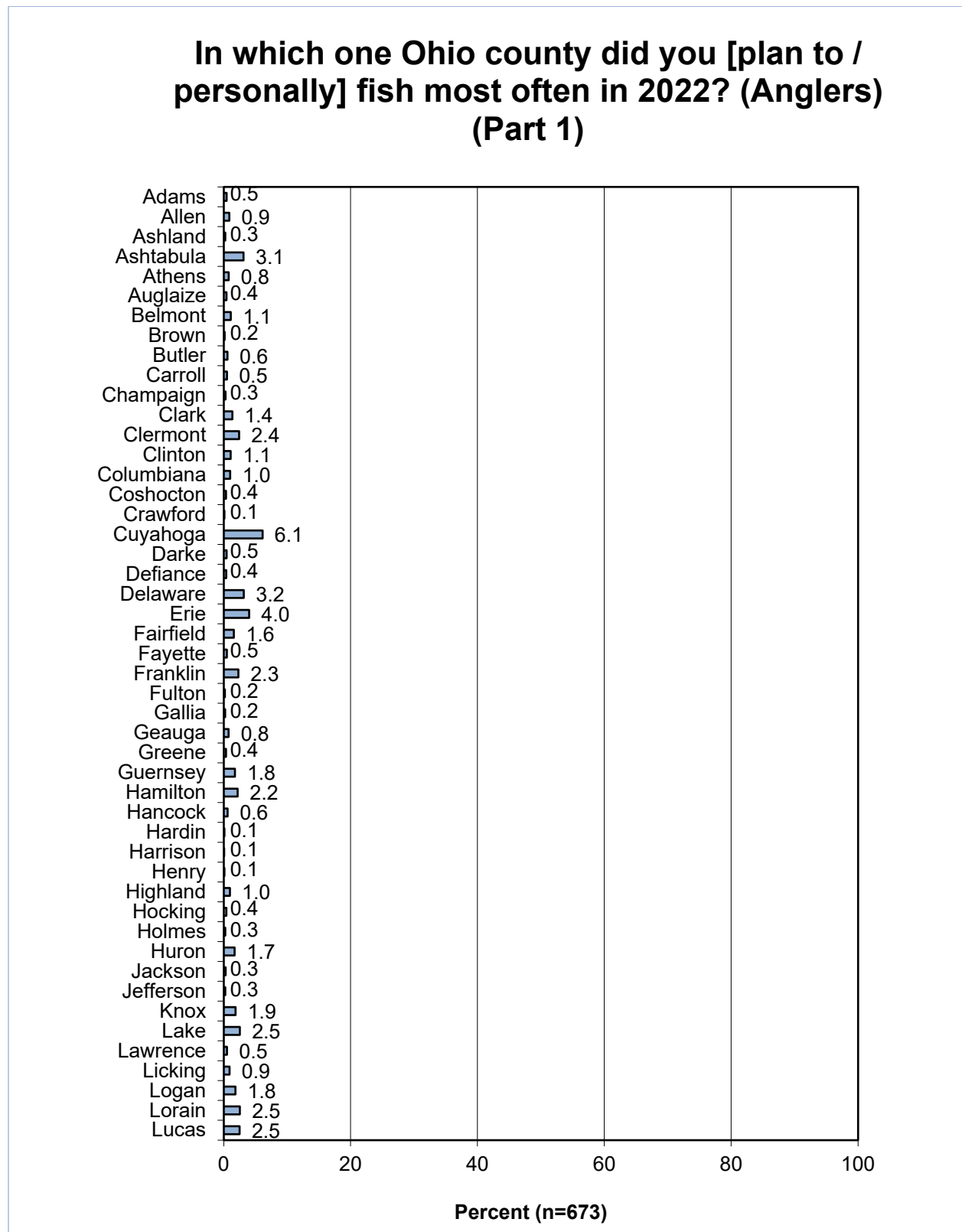
Where did you [plan to / personally] fish from in Ohio in 2022? (Multiple Responses Allowed) (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
From a bank or shoreline	70	61	65	75	82
From a pier or dock	30	30	30	28	28
From a boat	54	66	59	57	52
While wading	13	17	19	11	23



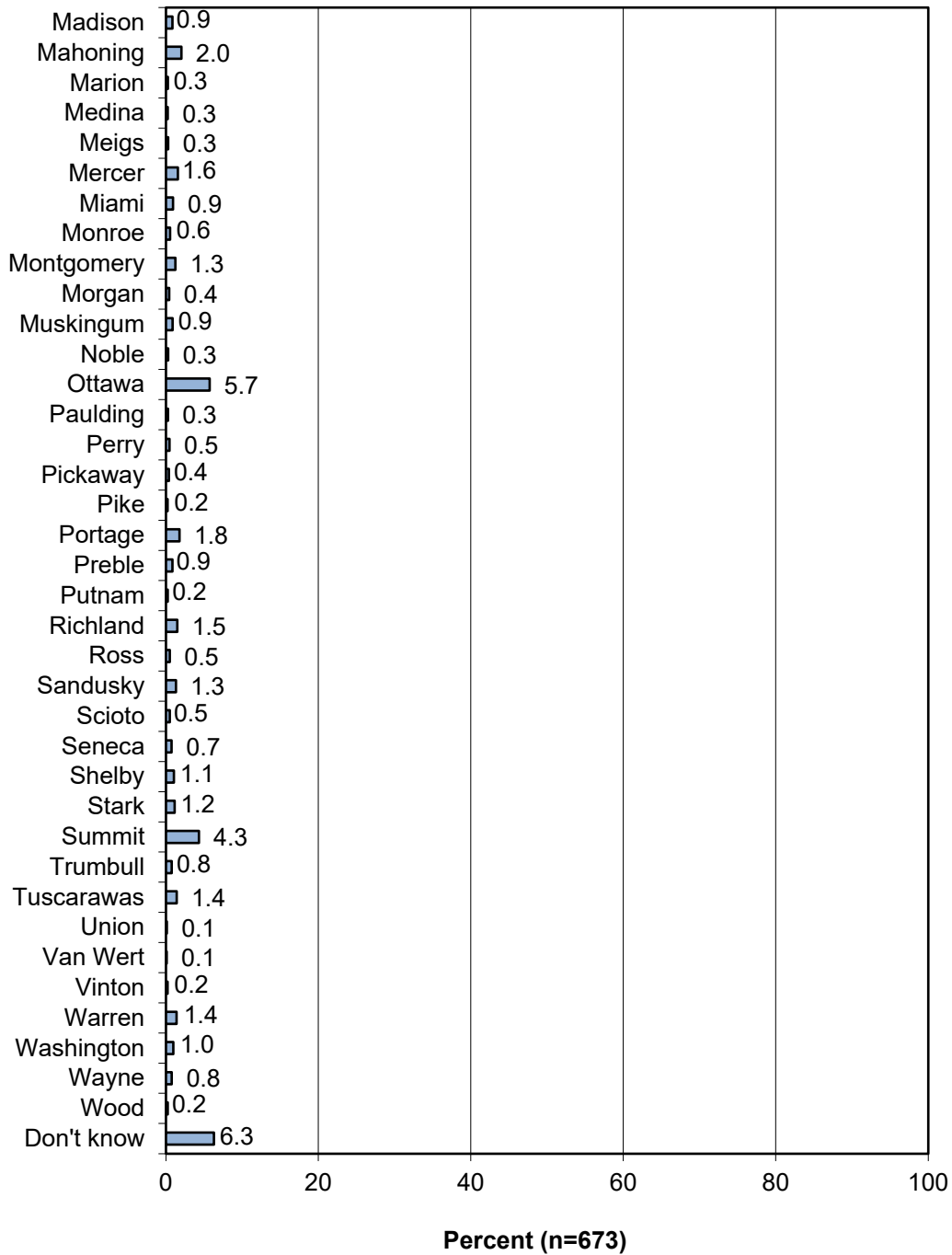
Which of those did you [plan to / personally] fish from most often in Ohio in 2022? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
From a bank or shoreline	51	42	44	54	58
From a boat	36	47	44	38	28
From a pier or dock	4	5	7	4	7
While wading	6	4	3	3	8

FISHING LOCATIONS

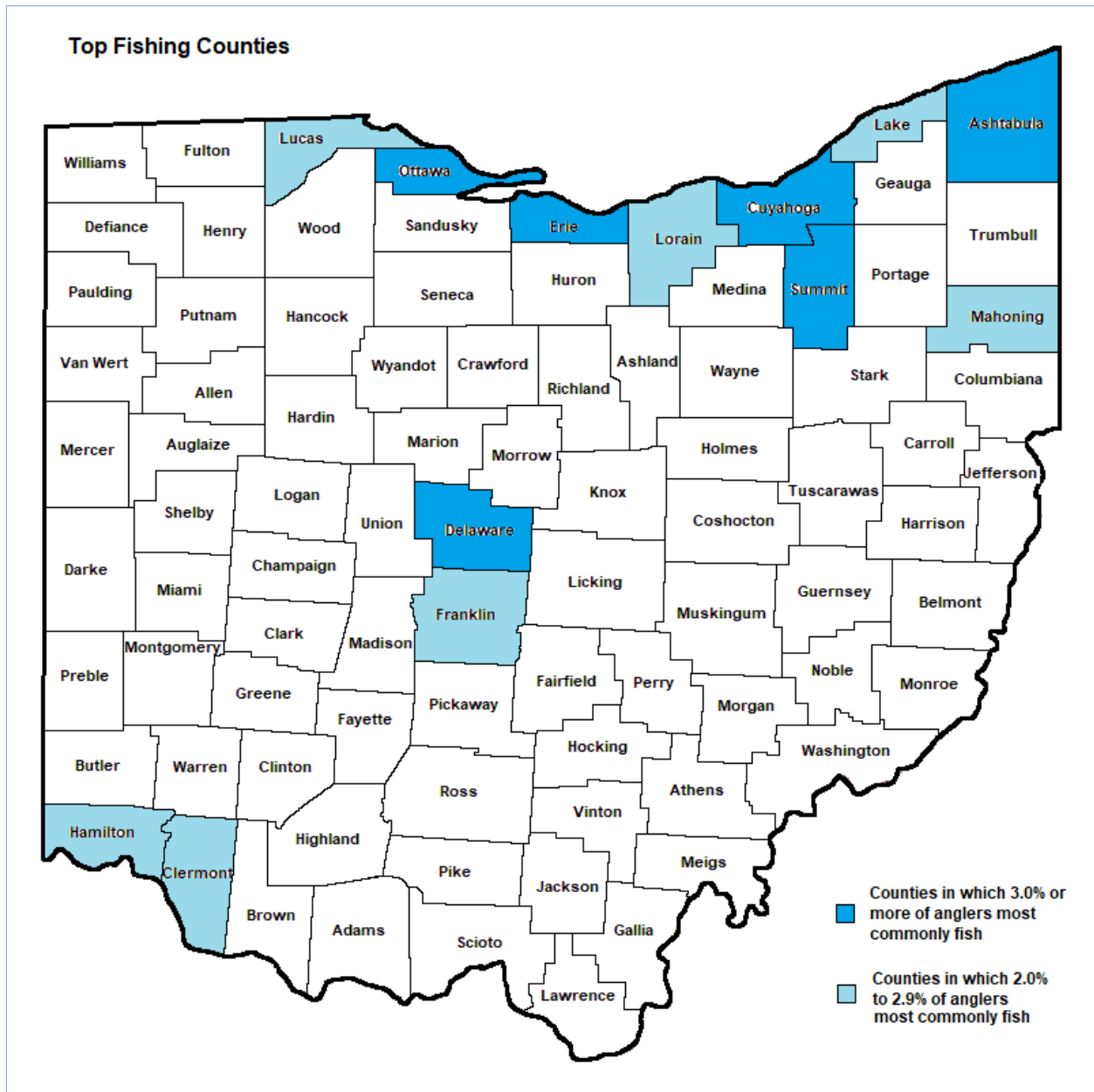
The graphs that follow show the top fishing counties.



In which one Ohio county did you [plan to / personally] fish most often in 2022? (Anglers) (Part 2)



The top counties for fishing include several along Lake Erie and along the Ohio River.

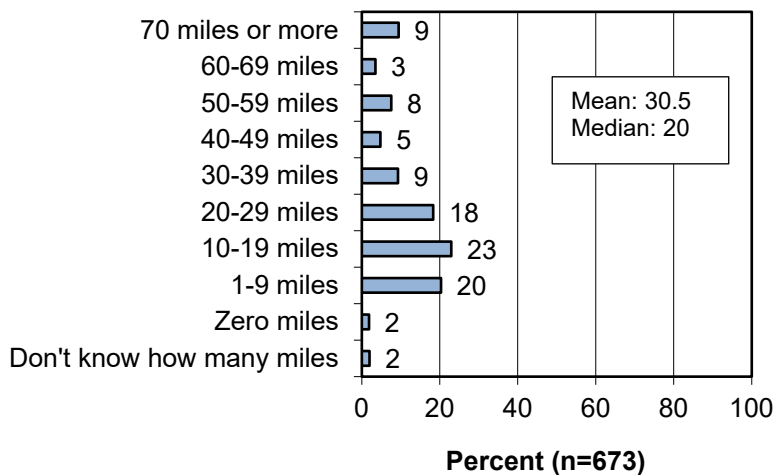


The results regarding most-visited county are presented in the table starting on the next page. The District breakdown is by where the angler lives.

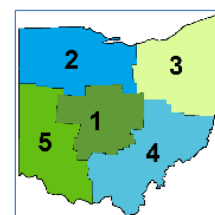
In which one Ohio county [did you plan to / did you] go fishing most often in 2022? (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	0	0	0	0	2
Allen	2	4	0	0	0
Ashland	0	0	1	0	0
Ashtabula	0	0	9	1	0
Athens	0	0	1	4	1
Auglaize	0	1	0	0	2
Belmont	0	0	0	11	0
Brown	0	0	0	0	1
Butler	0	1	0	0	2
Carroll	0	0	1	0	0
Champaign	1	0	0	0	1
Clark	2	0	0	0	5
Clermont	0	0	0	1	12
Clinton	0	0	0	0	5
Columbiana	0	0	3	0	0
Coshocton	1	0	0	2	0
Crawford	0	1	0	0	0
Cuyahoga	1	0	16	1	2
Darke	0	0	0	0	2
Defiance	0	2	0	0	1
Delaware	18	0	0	0	0
Erie	4	18	1	0	0
Fairfield	8	0	0	1	0
Fayette	2	0	0	1	1
Franklin	12	1	0	1	0
Fulton	0	1	0	1	0
Gallia	0	0	0	2	0
Geauga	0	0	2	0	0
Greene	1	0	0	1	1
Guernsey	1	0	1	8	2
Hamilton	0	0	0	0	11
Hancock	0	4	0	0	0
Hardin	0	1	0	0	0
Harrison	0	0	0	1	0
Henry	0	1	0	0	0
Highland	0	1	0	2	3
Hocking	1	0	0	3	0
Holmes	0	0	1	0	0
Huron	0	4	3	1	0
Jackson	0	0	0	3	0
Jefferson	0	0	1	0	0
Knox	9	1	0	0	1
Lake	0	0	7	0	0
Lawrence	0	0	0	5	0
Licking	5	0	0	0	0
Logan	6	2	0	1	2
Lorain	0	0	7	0	0
Lucas	1	14	0	0	1
Madison	4	0	0	1	0
Mahoning	0	0	6	0	0
Marion	2	0	0	0	0
Medina	0	0	1	0	0
Meigs	0	0	0	3	0

In which one Ohio county [did you plan to / did you] go fishing most often in 2022? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Mercer	0	3	0	0	5
Miami	0	0	0	0	5
Monroe	0	0	1	3	0
Montgomery	0	0	0	0	6
Morgan	0	0	0	4	0
Muskingum	0	0	0	9	0
Noble	0	0	0	3	0
Ottawa	6	19	4	1	2
Paulding	0	1	0	0	1
Perry	2	0	0	2	0
Pickaway	2	0	0	0	0
Pike	0	0	0	2	0
Portage	0	0	5	0	0
Preble	0	0	0	1	4
Putnam	0	2	0	0	0
Richland	1	4	2	0	0
Ross	0	0	0	5	0
Sandusky	0	7	0	1	1
Scioto	0	0	0	4	1
Seneca	0	3	1	0	0
Shelby	0	1	0	0	5
Stark	1	0	3	0	0
Summit	0	0	12	0	0
Trumbull	0	0	2	0	0
Tuscarawas	0	0	4	0	1
Union	1	0	0	0	0
Van Wert	0	1	0	0	0
Vinton	0	0	0	2	0
Warren	0	0	0	0	7
Washington	0	0	0	8	1
Wayne	0	0	2	0	0
Wood	0	2	0	0	0

[When you do go fishing, how / How] far, in miles, do you typically travel one way from home to fish? (Anglers)

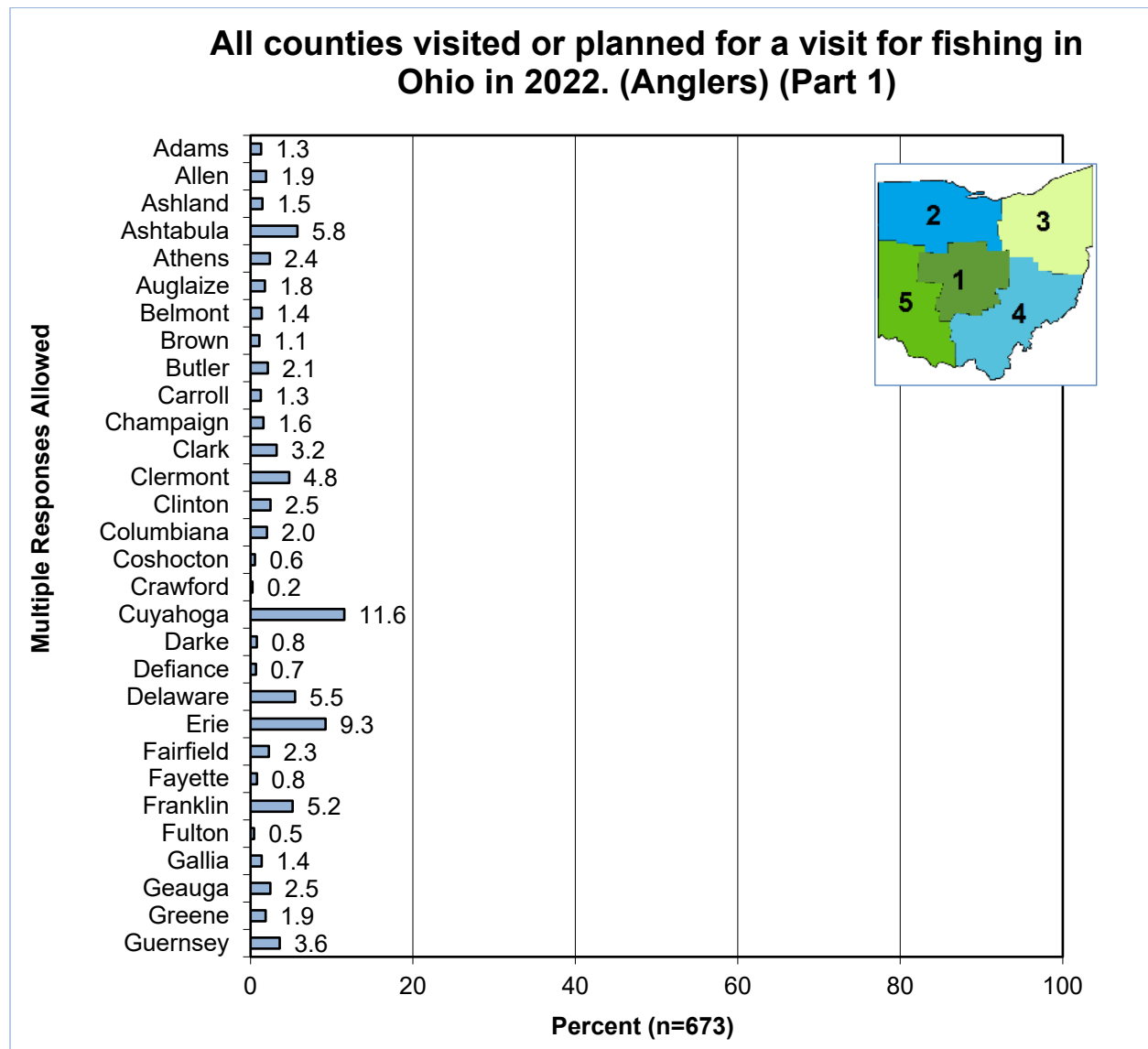


Travel distances for typical fishing trips are shown in the accompanying graph. The mean typical distance is 30.5 miles; the median is 20 miles. District results are tabulated on the next page.

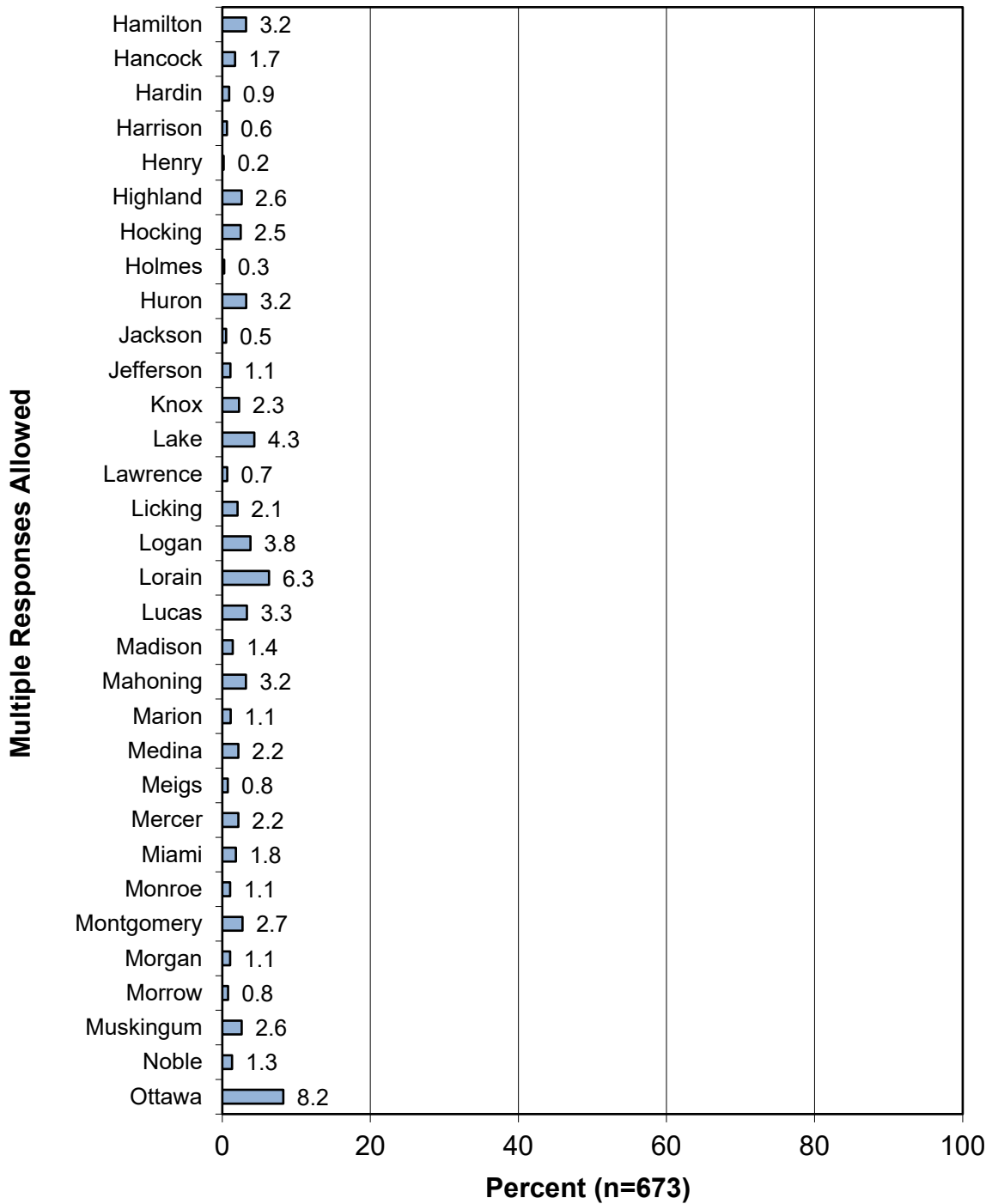


[When you do go fishing, how / How] far, in miles, do you typically travel one way from home to go fishing? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
70 miles or more	16	10	5	8	12
60-69 miles	2	4	5	4	2
50-59 miles	5	8	10	9	5
40-49 miles	2	7	6	9	1
30-39 miles	7	14	7	11	12
20-29 miles	15	15	20	19	20
10-19 miles	28	18	26	19	19
1-9 miles	21	19	17	18	27
0 miles	1	3	2	1	2
Don't know how many miles	3	2	1	2	2

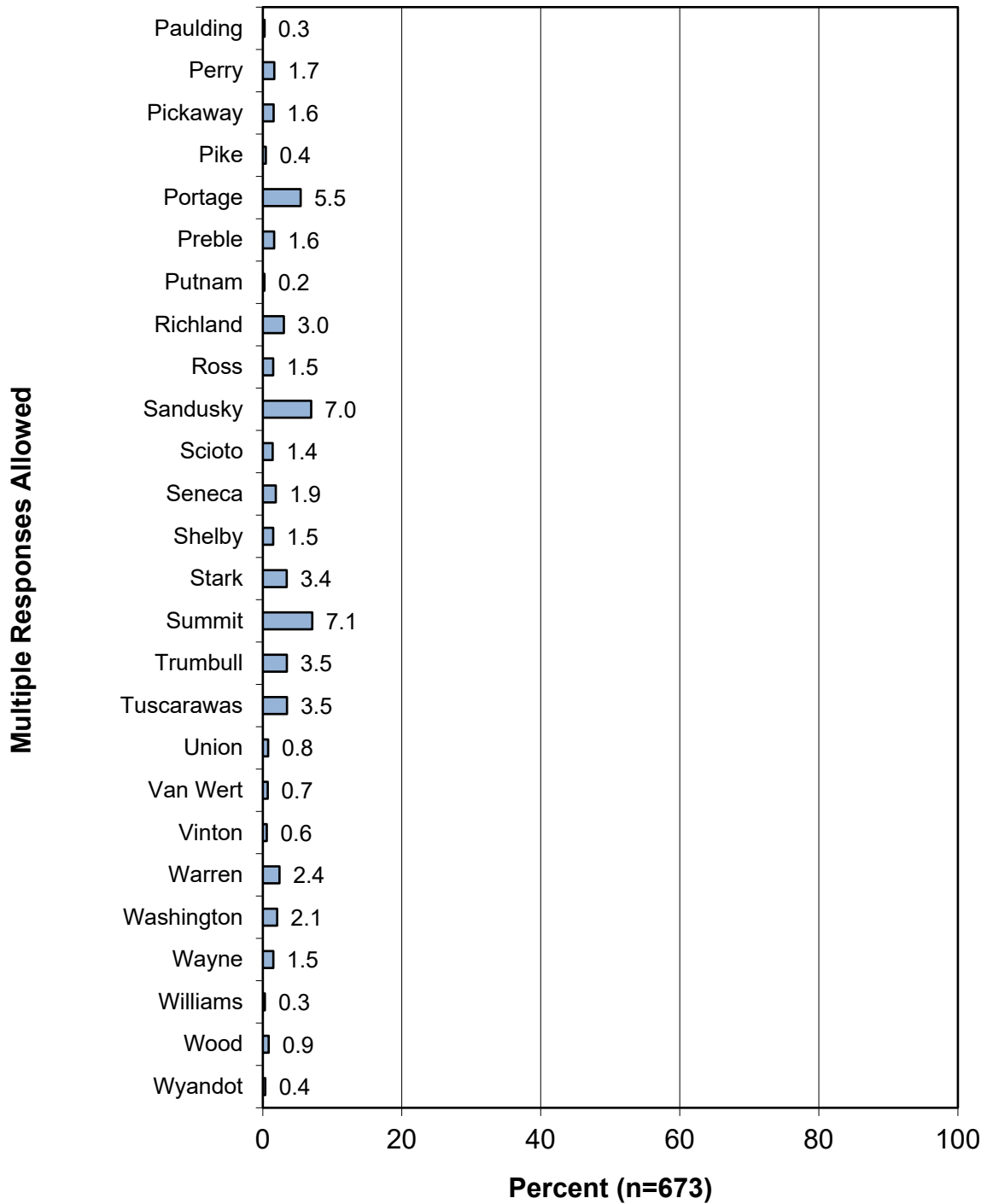
Below and in the next pages are graphs showing all counties visited (or to which a trip was planned) for fishing, including the most-visited as well as any other counties that were visited.



All counties visited or planned for a visit for fishing in Ohio in 2022. (Anglers) (Part 2)

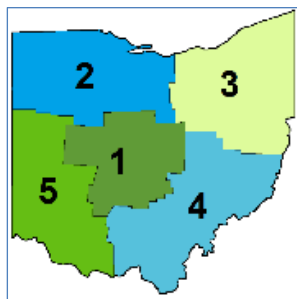


All counties visited or planned for a visit for fishing in Ohio in 2022. (Anglers) (Part 3)

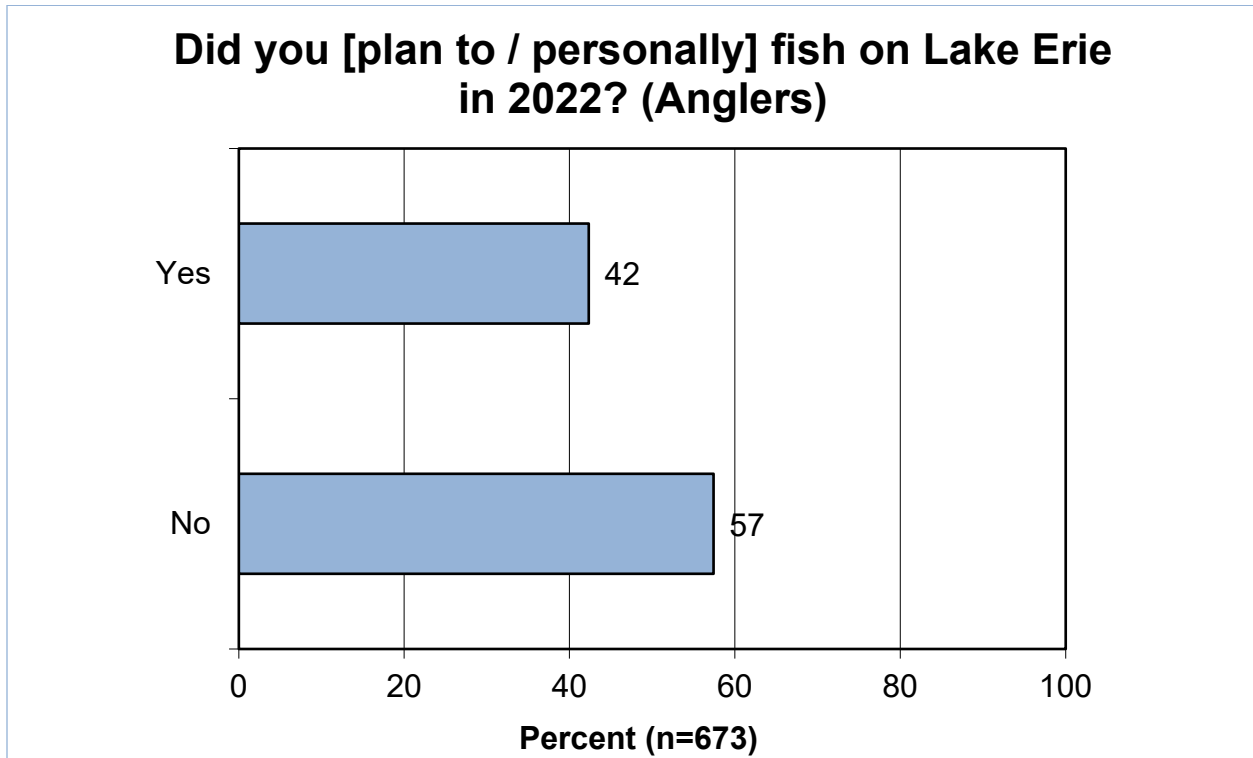


All counties visited or planned for a visit for fishing in Ohio in 2022. (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	0	0	0	2	5
Allen	1	9	0	0	2
Ashland	1	2	3	1	0
Ashtabula	1	0	15	3	0
Athens	3	0	1	9	2
Auglaize	0	2	0	0	7
Belmont	1	0	0	12	0
Brown	0	0	0	0	5
Butler	1	1	0	0	9
Carroll	0	0	4	0	0
Champaign	4	0	0	0	5
Clark	4	2	0	0	11
Clermont	0	0	0	1	23
Clinton	0	1	0	0	12
Columbiana	0	0	6	0	0
Coshocton	1	0	0	3	0
Crawford	0	2	0	0	0
Cuyahoga	1	2	27	3	5
Darke	0	0	0	0	4
Defiance	0	2	0	0	2
Delaware	26	1	1	1	1
Erie	8	29	7	1	3
Fairfield	9	0	0	5	1
Fayette	1	0	0	2	2
Franklin	25	2	0	3	1
Fulton	0	1	1	1	0
Gallia	1	0	1	6	1
Geauga	0	0	6	0	1
Greene	1	0	1	1	7
Guernsey	4	0	2	18	2
Hamilton	0	0	0	1	15
Hancock	0	11	0	0	0
Hardin	0	4	0	0	2
Harrison	0	0	1	4	0
Henry	0	1	0	1	0
Highland	0	1	1	6	8
Hocking	7	1	0	9	1
Holmes	0	0	1	0	0
Huron	1	11	3	1	1
Jackson	0	0	0	5	0
Jefferson	1	0	2	1	0
Knox	11	1	0	0	1
Lake	0	0	12	0	0
Lawrence	0	0	0	6	0
Licking	10	0	0	2	0
Logan	11	5	0	1	5
Lorain	1	4	15	1	0
Lucas	1	17	1	1	1
Madison	6	1	0	1	1
Mahoning	1	0	9	0	0
Marion	6	0	0	1	0
Medina	1	0	6	0	0
Meigs	0	0	0	6	1

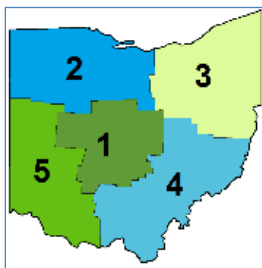
All counties visited or planned for a visit for fishing in Ohio in 2022. (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Mercer	0	4	0	0	8
Miami	0	1	0	0	8
Monroe	1	0	1	6	0
Montgomery	0	0	0	1	13
Morgan	2	0	0	6	0
Morrow	3	2	0	0	0
Muskingum	4	0	1	16	0
Noble	1	0	0	11	0
Ottawa	10	28	4	2	2
Paulding	0	1	0	0	1
Perry	5	0	0	6	1
Pickaway	5	0	1	2	1
Pike	0	0	0	4	0
Portage	1	0	14	1	1
Preble	0	0	0	1	8
Putnam	0	2	0	0	0
Richland	4	7	4	0	0
Ross	2	0	0	9	1
Sandusky	5	18	6	3	3
Scioto	0	1	1	7	2
Seneca	0	10	1	0	1
Shelby	1	1	0	0	6
Stark	1	0	9	0	0
Summit	0	0	20	0	0
Trumbull	0	0	9	0	1
Tuscarawas	1	0	9	1	1
Union	4	1	0	0	0
Van Wert	0	2	0	0	2
Vinton	0	0	0	6	0
Warren	0	0	0	1	12
Washington	0	0	1	13	1
Wayne	0	2	4	0	0
Williams	0	2	0	1	0
Wood	0	6	0	0	0
Wyandot	0	2	0	0	0



The survey found that 42% of anglers fished (or planned to fish) on Lake Erie in 2022. District 2 had the highest rate followed by District 3. Lake Erie is within both of those districts. The southernmost districts in the state—the farthest from Lake Erie—have the lowest rate.

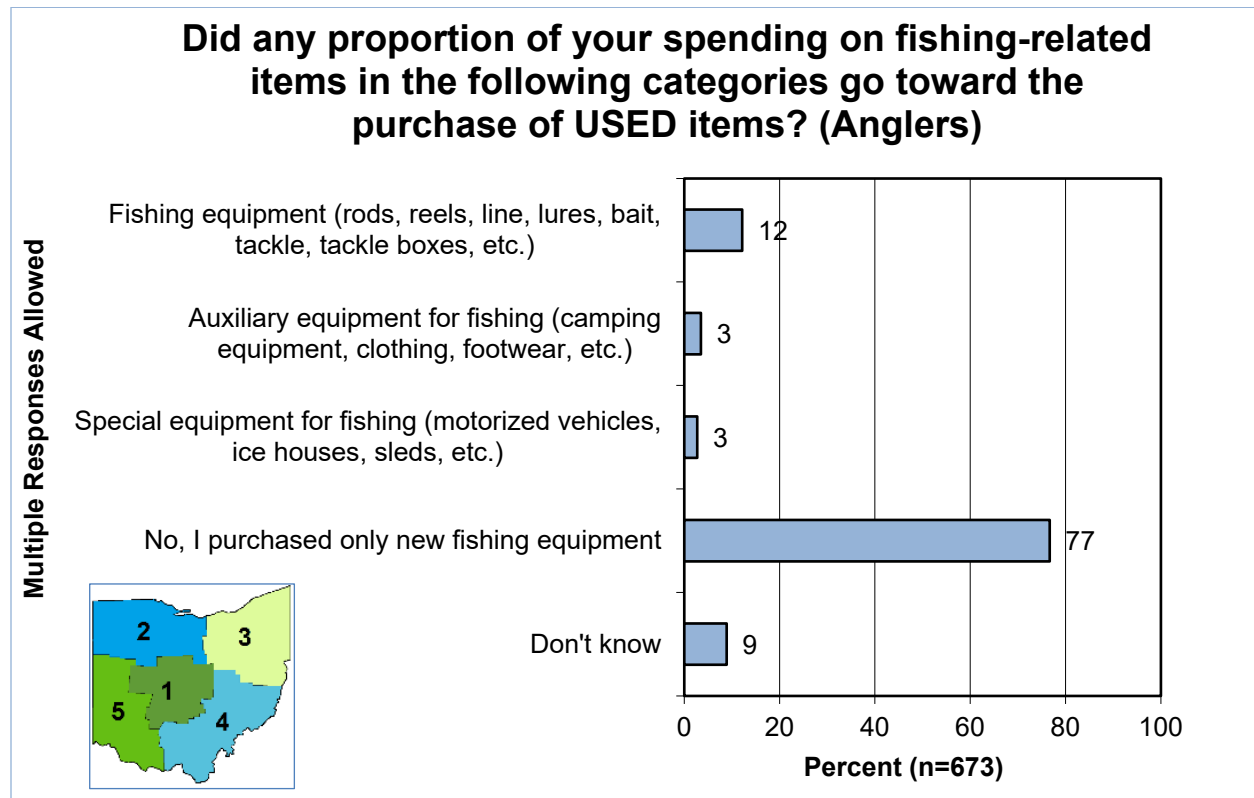


Did you [plan to / personally] fish on Lake Erie in 2022? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Yes	35	66	52	25	23
No	65	33	48	75	77



FISHING EXPENDITURES (USED)

A little more than three quarters of anglers only purchased new fishing equipment rather than used. District results are tabulated below the graph.

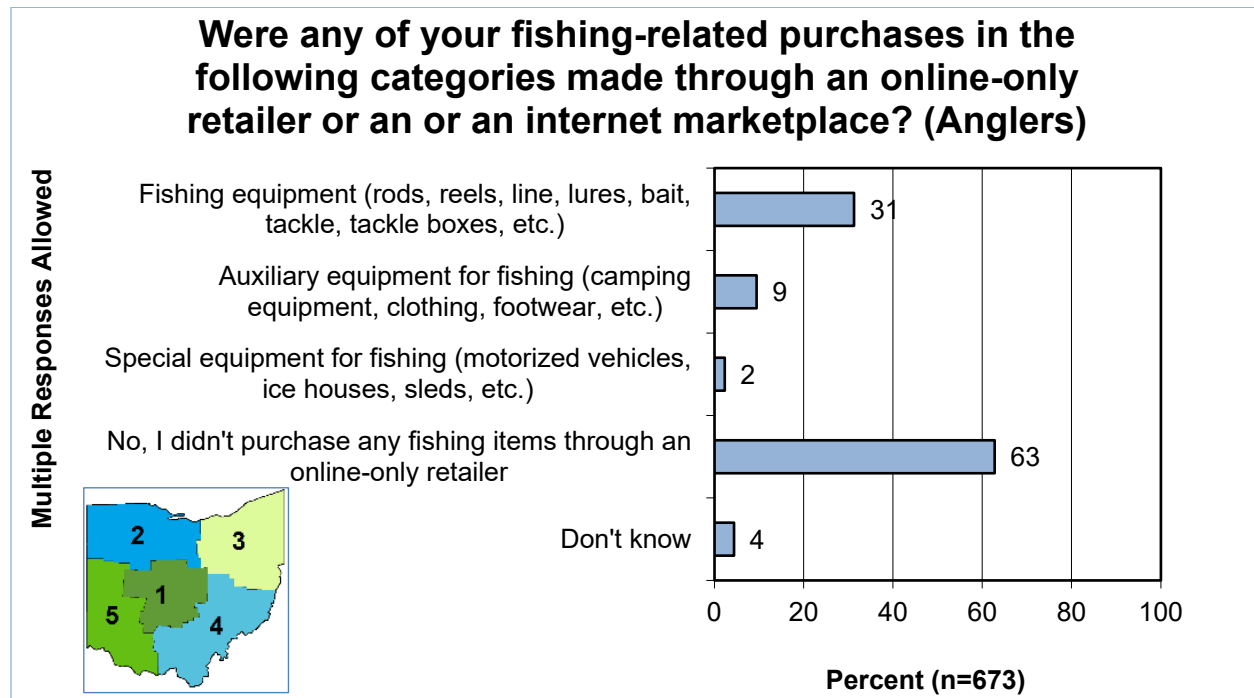


Did any proportion of your spending on fishing-related items in the following categories go toward the purchase of used items? (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Fishing equipment (rods, reels, line, lures, bait, tackle, tackle boxes, etc.)	11	13	12	15	11
Special equipment for fishing (motorized vehicles, ice houses, sleds, etc.)	3	2	3	3	3
Auxiliary equipment for fishing (camping equipment, clothing, footwear, etc.)	2	3	4	6	2
No, I purchased only new fishing equipment	76	75	78	76	76

What proportion of your annual fishing-related spending on equipment went toward the purchase of USED items? (Anglers)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Fishing equipment (rods, reels, line, lures, bait, tackle, tackle boxes, etc.)	3.5	4.1	3.3	3.4	5.3	2.6
Auxiliary equipment for fishing (camping equipment, clothing, footwear, etc.)	0.6	0.1	0.5	0.9	1.2	0.1
Special equipment for fishing (motorized vehicles, ice houses, sleds, etc.)	0.9	1.8	0.8	1.0	0.9	0.1

FISHING EXPENDITURES (ONLINE)

Most anglers (63%) did not spend anything through an online-only retailer or internet marketplace. Following the graph are the District results.



Were any of your fishing-related purchases in the following categories made through an online-only retailer or an or an internet marketplace such as Amazon, eBay, or another online retailer? (Anglers)

Percentages	District 1	District 2	District 3	District 4	District 5
Fishing equipment (rods, reels, line, lures, bait, tackle, tackle boxes, etc.)	30	25	34	41	28
Auxiliary equipment for fishing (camping equipment, clothing, footwear, etc.)	9	6	11	11	9
Special equipment for fishing (motorized vehicles, ice houses, sleds, etc.)	3	2	2	3	2
No, I didn't purchase any fishing items through an online-only retailer	64	68	63	52	63
Don't know	4	6	3	6	6

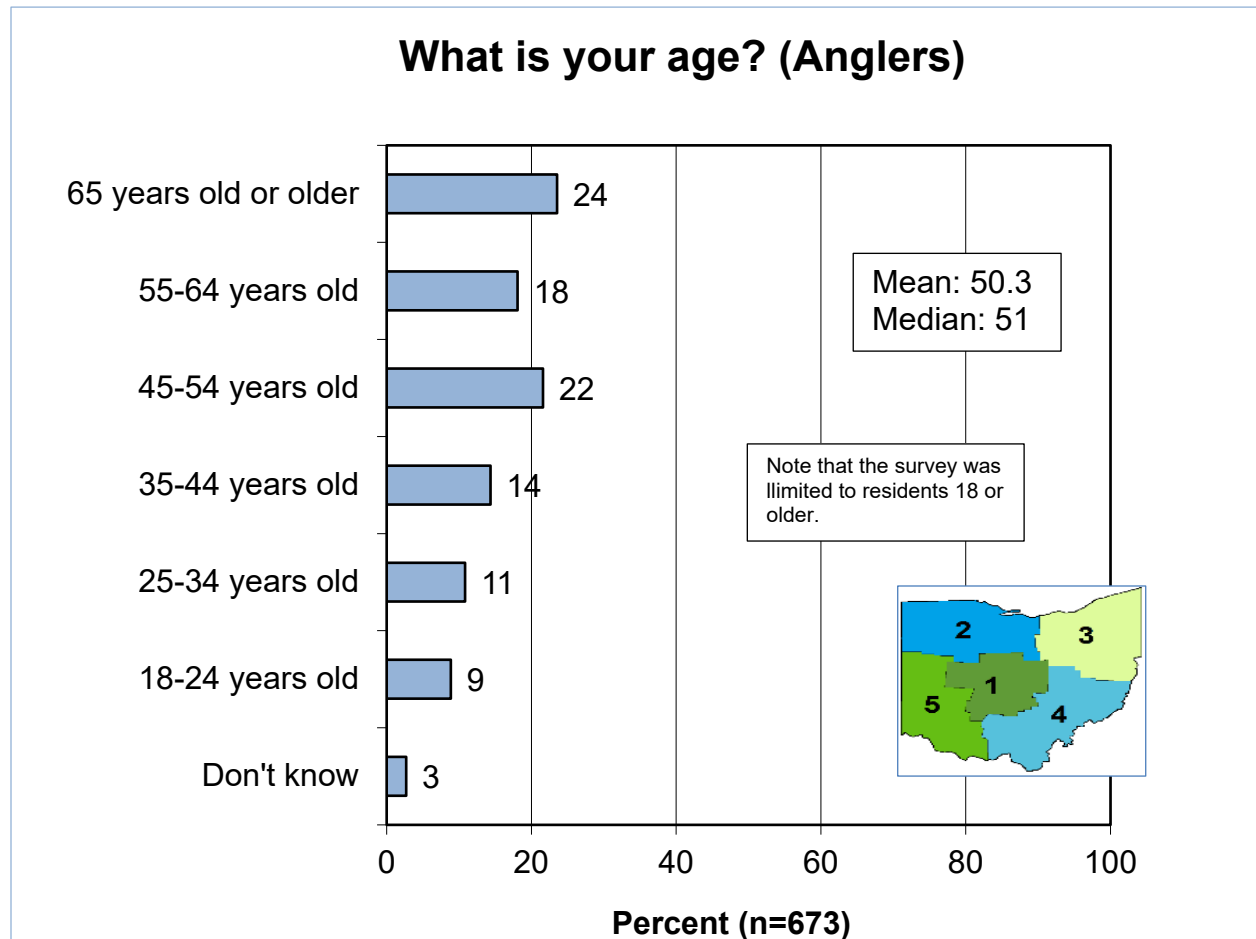
What proportion of your annual fishing-related spending on equipment went toward the purchase of items through an online-only retailer or an or an internet marketplace? (Anglers)

Mean Percentages	Overall	District 1	District 2	District 3	District 4	District 5
Fishing equipment (rods, reels, line, lures, bait, tackle, tackle boxes, etc.)	12.6	11.2	11.1	13.8	14.8	12.0
Auxiliary equipment for fishing (camping equipment, clothing, footwear, etc.)	4.3	2.5	2.2	5.3	6.1	4.8
Special equipment for fishing (motorized vehicles, ice houses, sleds, etc.)	0.7	0.5	0.2	0.9	1.0	0.7

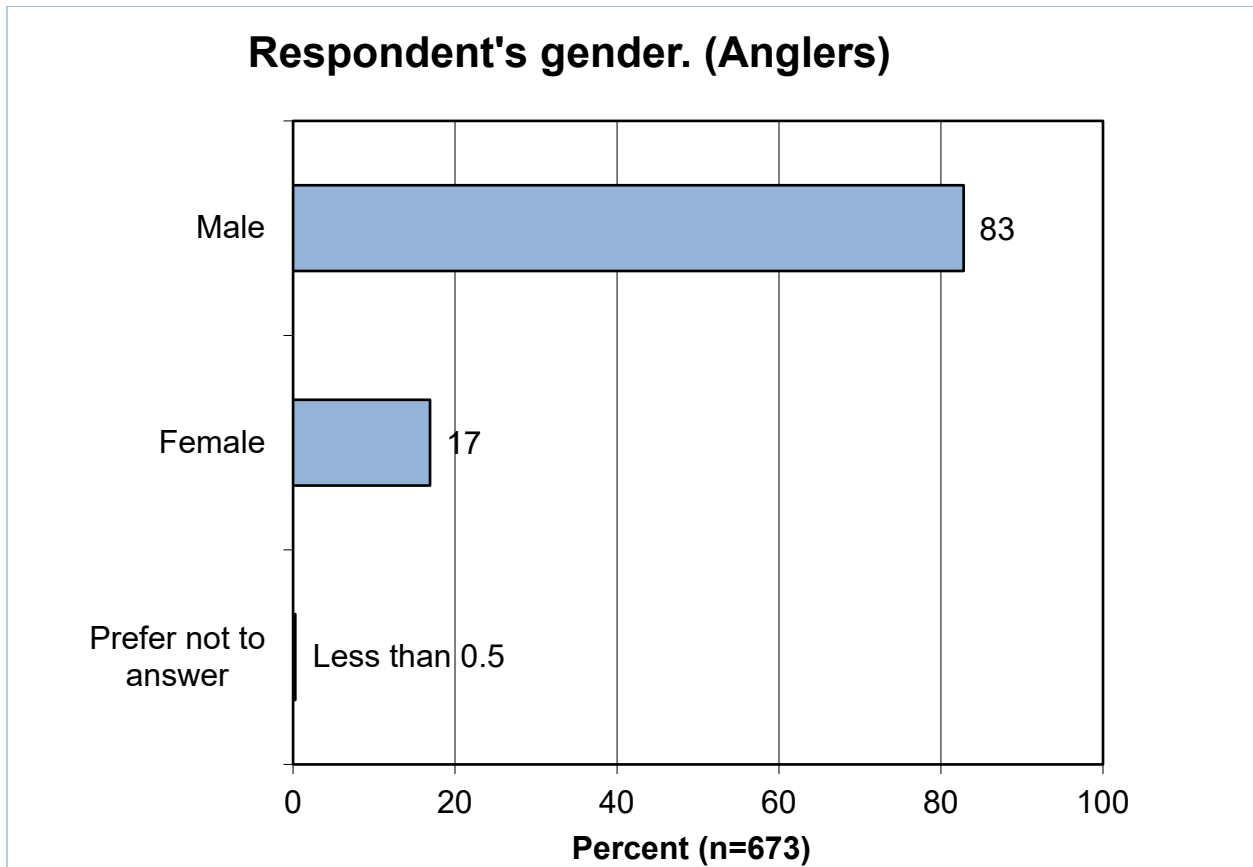
DEMOGRAPHIC CHARACTERISTICS

The survey gathered the following information:

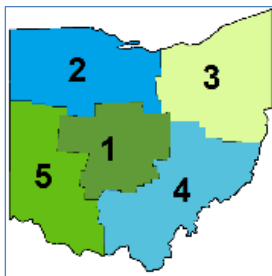
- Age.
- Gender.
- Ethnicity.
- Residential area: urban to rural continuum.
- County of residence.



What is your age? (Anglers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
65 years old or older	19	30	24	18	25
55-64 years old	20	14	19	20	18
45-54 years old	25	23	24	22	14
35-44 years old	14	12	14	18	16
25-34 years old	14	7	10	6	15
18-24 years old	4	11	9	16	7
Don't know	4	2	1	1	5
Mean age (years)	50.4	51.8	50.6	47.8	50.1
Median age (years)	50	52	52	51	51

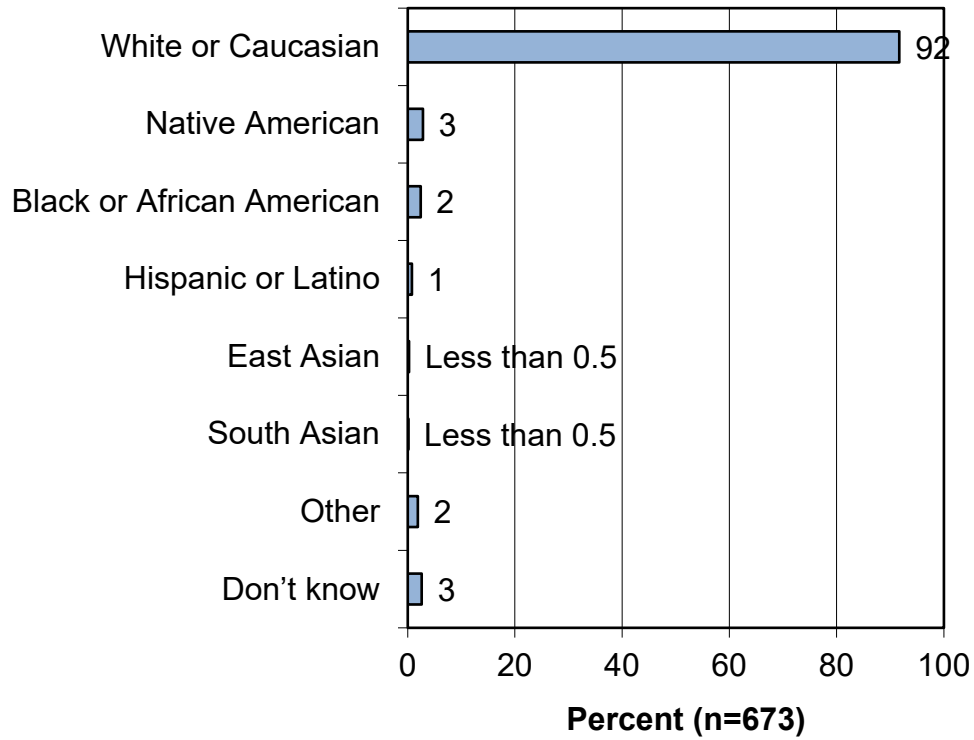


Respondent's gender. (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Male	78	78	86	77	88
Female	21	22	14	23	12
Prefer to self-describe	1	0	0	0	1



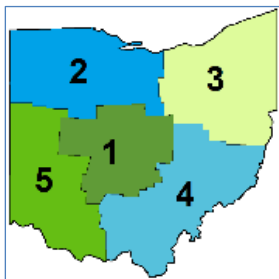
What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Anglers)

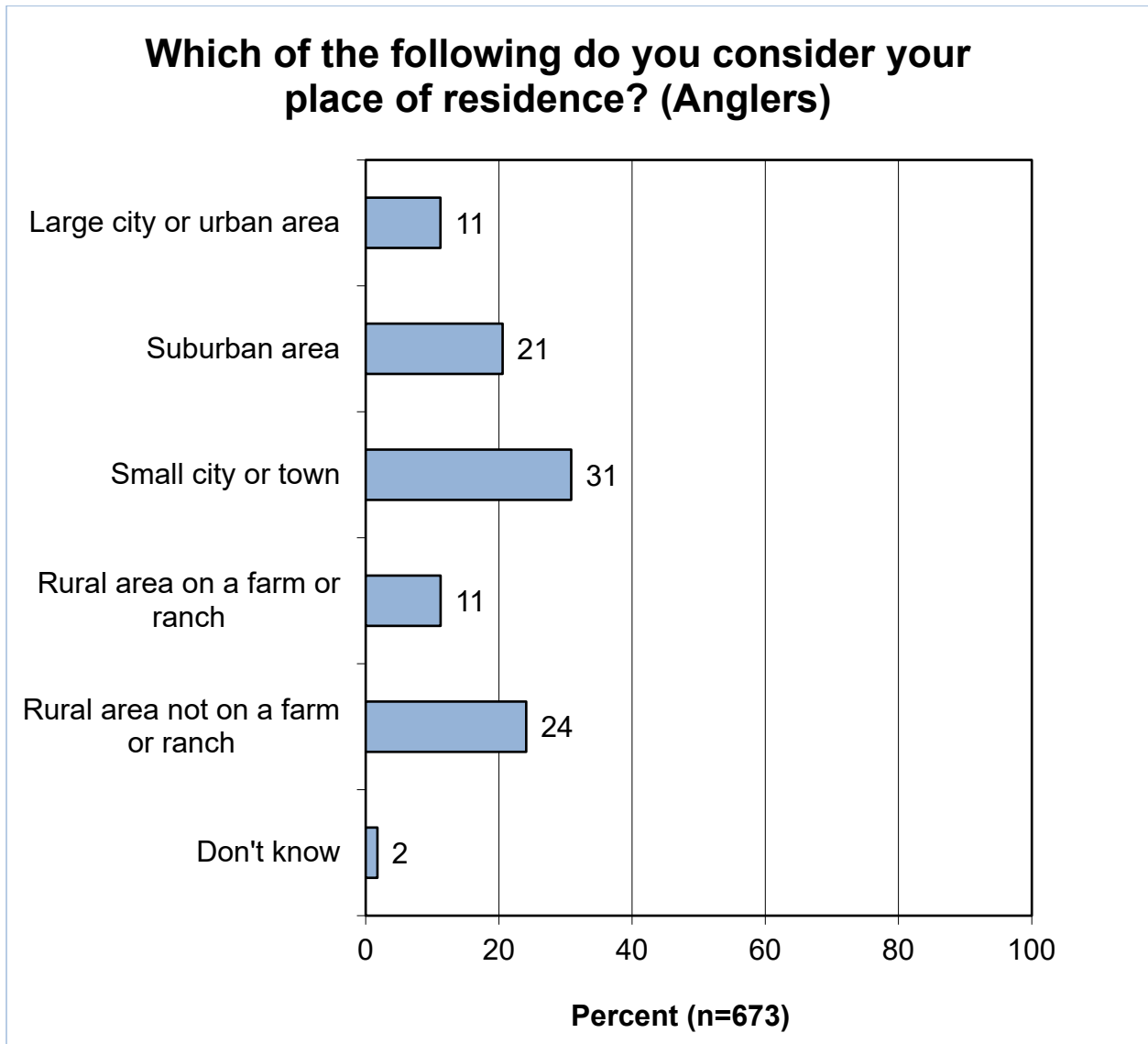
Multiple Responses Allowed



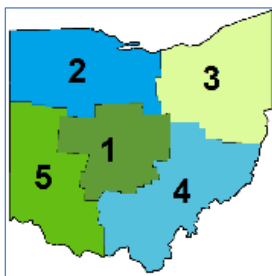
What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Anglers)

Percentages	District 1	District 2	District 3	District 4	District 5
White or Caucasian	88	95	91	96	91
Native American	0	1	4	4	5
Black or African American	1	1	4	1	3
Hispanic or Latino	1	2	1	0	1
East Asian	1	0	0	0	0
South Asian	1	0	0	0	0
Other	3	1	3	1	1
Don't know	5	2	1	1	5

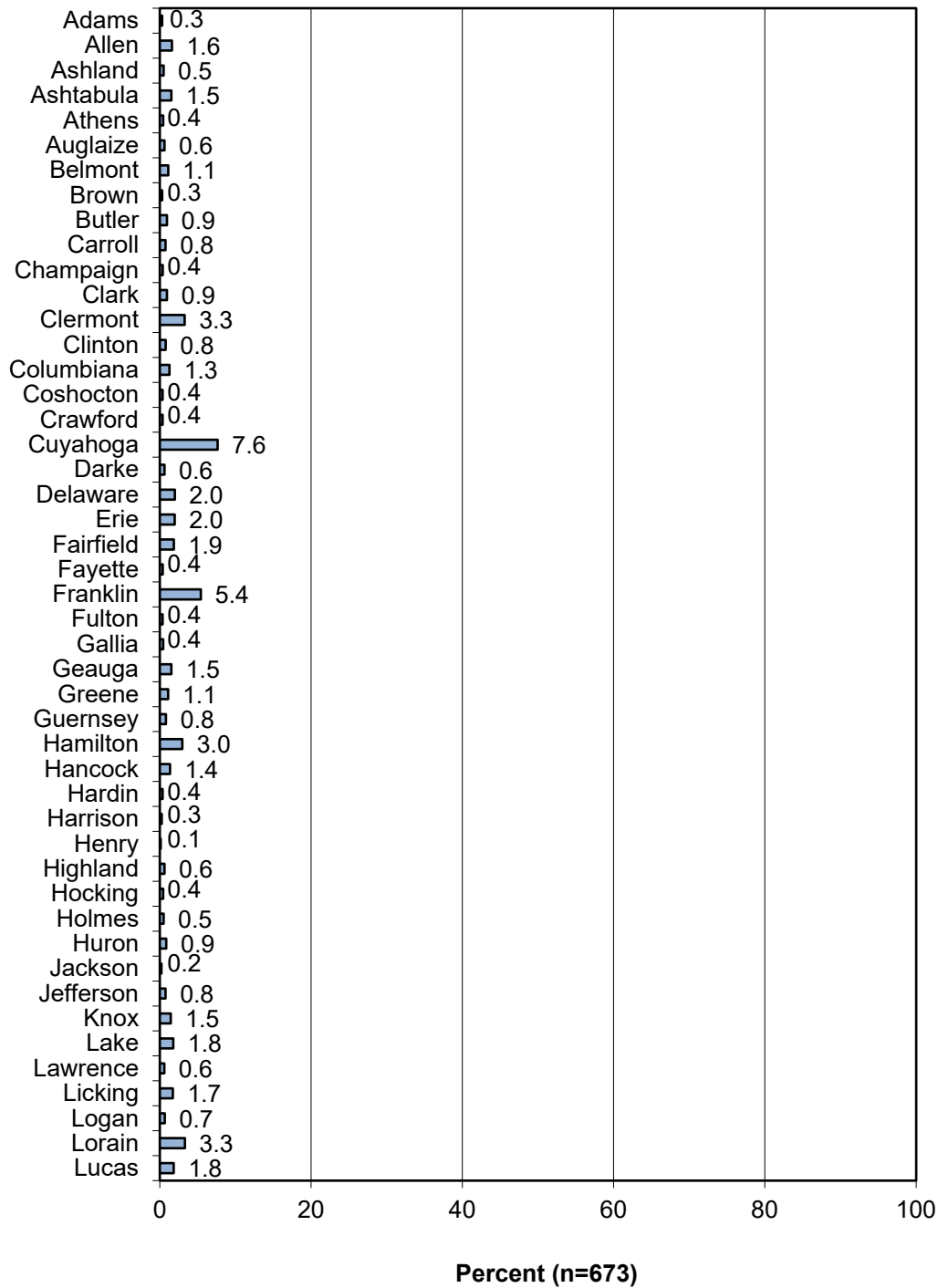




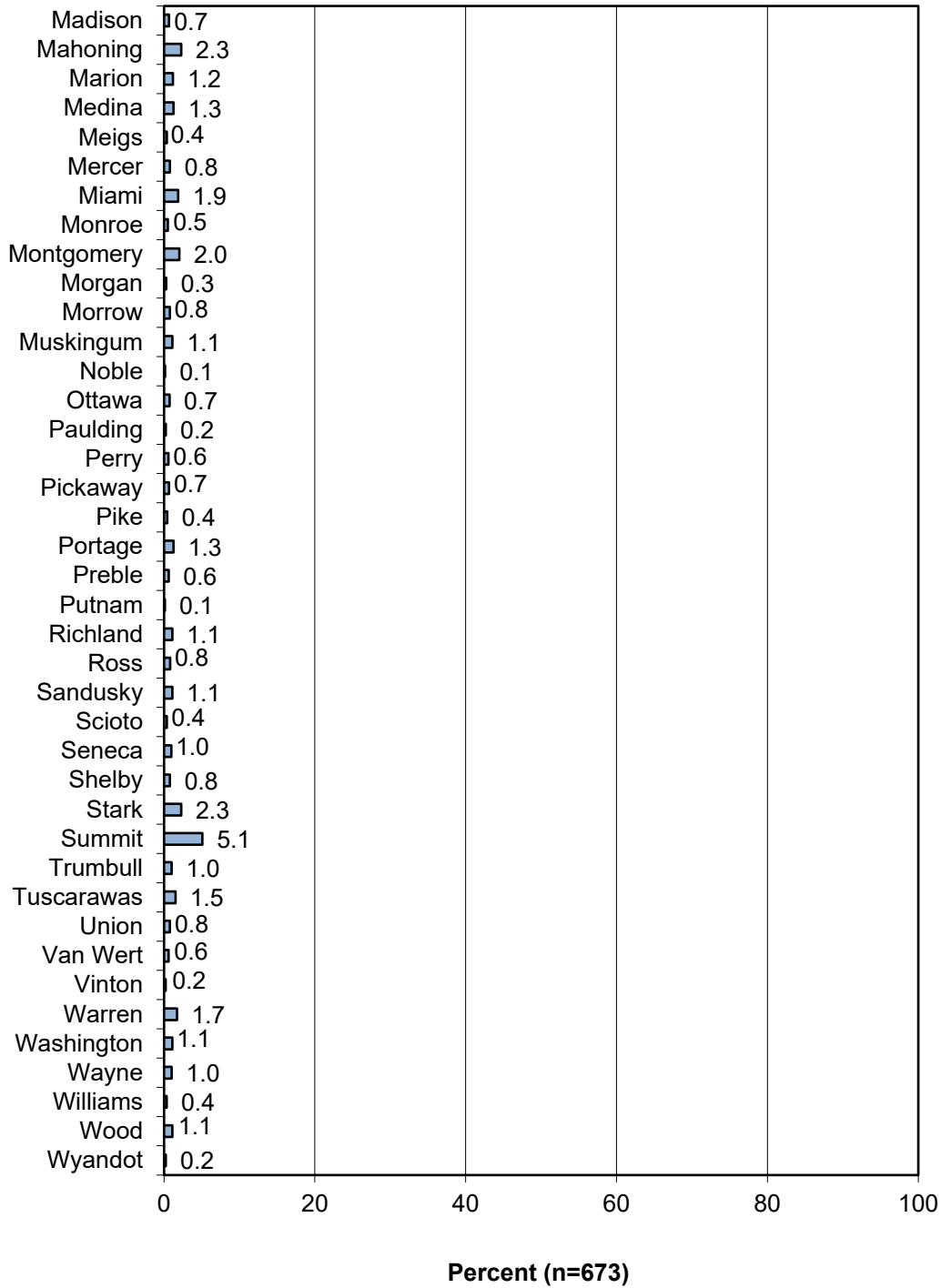
Which of the following do you consider your place of residence? (Anglers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Large city or urban area	13	6	17	1	9
Suburban area	25	9	26	5	25
Small city or town	21	47	31	35	25
Rural area on a farm or ranch	3	2	0	1	4
Rural area not on a farm or ranch	8	13	8	27	11



What county do you live in? (Anglers) (Part 1)



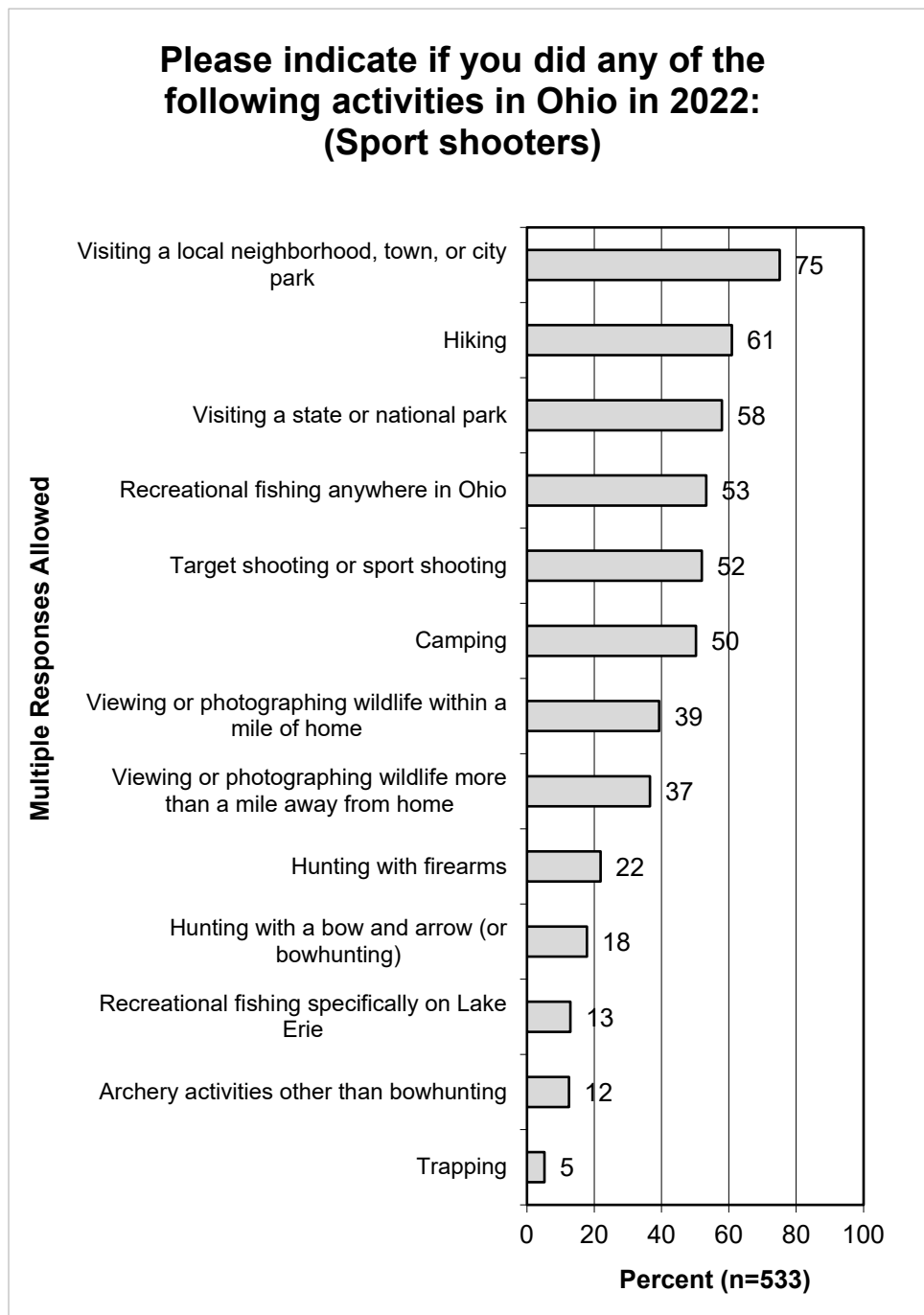
What county do you live in? (Anglers) (Part 2)



PARTICIPATION AND EXPENDITURE SURVEY OF SPORT SHOOTERS

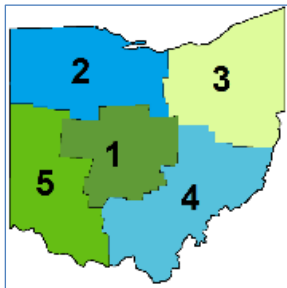
This section looks at sport shooting, consisting of those who went shooting in 2022 or who had spent money on shooting equipment with the intention of doing so. Participation in outdoor recreation in general by shooters is first examined before the report looks at shooting itself. The section discusses equipment used, shooting locations, and expenditures. The section ends with demographic analyses of sport shooters.

PARTICIPATION IN OUTDOOR RECREATION



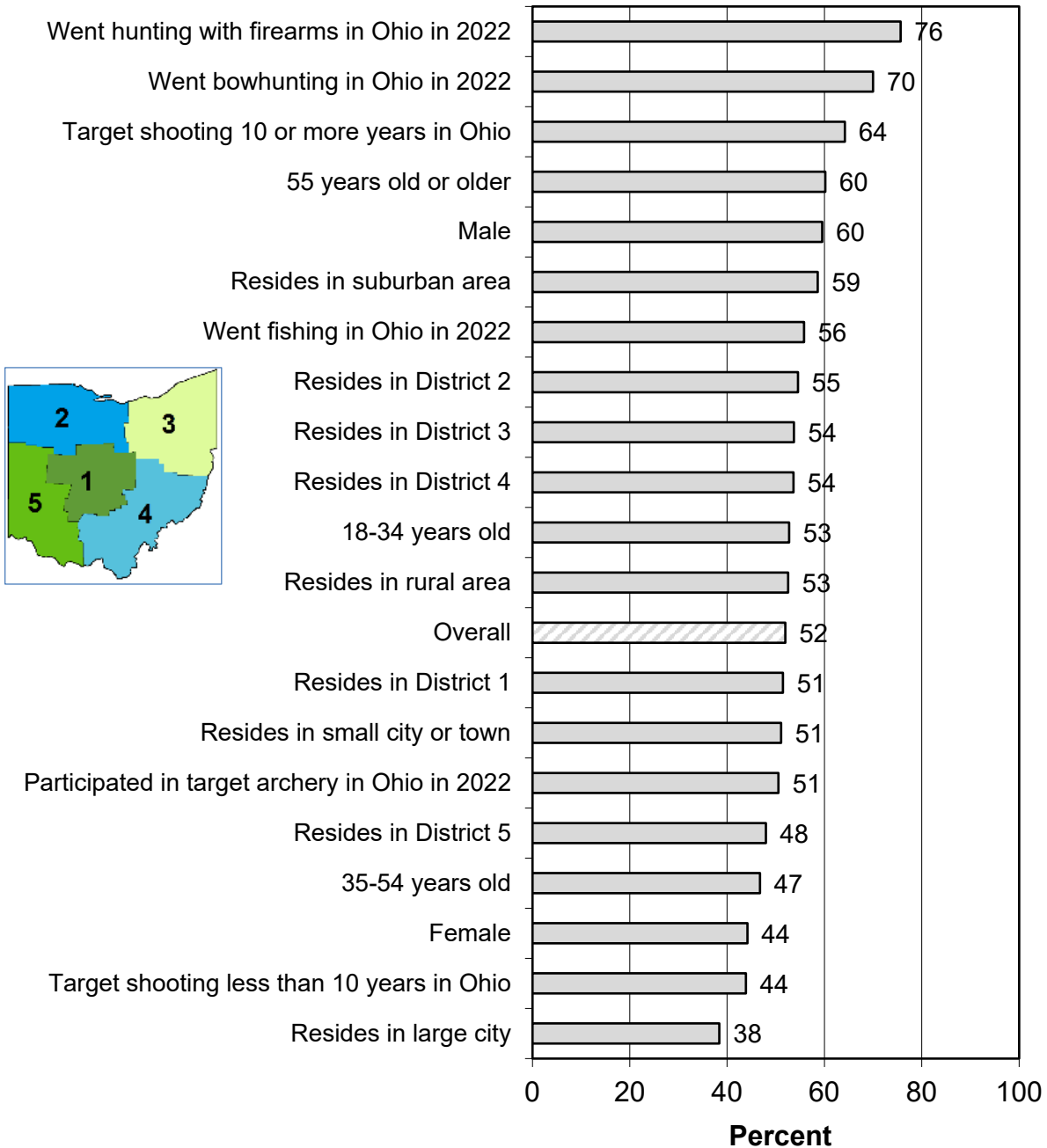
Residents in the shooter sample were provided with a list of outdoor recreation activities, and they were asked if they participated in each in Ohio in 2022. The most common activities were visiting a local park (75% did this), hiking (61%), visiting a state or national park (58%), and fishing anywhere in Ohio (53%). Over half (52%) went sport shooting, while another 12% participated in target archery. The full list is shown, and a tabulation of District results is on the following page.

Please indicate if you did any of the following activities in Ohio in 2022: (Multiple Responses Allowed) (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Visiting a local neighborhood, town, or city park	77	82	76	70	70
Hiking	68	44	65	55	60
Visiting a state or national park	62	36	65	57	55
Recreational fishing anywhere in Ohio	65	44	47	70	53
Target shooting or sport shooting	51	55	54	54	48
Camping	47	46	50	61	53
Viewing or photographing wildlife within a mile of home	28	29	47	45	40
Viewing or photographing wildlife more than a mile away from home	36	21	43	43	34
Hunting with firearms	30	19	18	37	19
Hunting with a bow and arrow (or bowhunting)	27	6	20	23	13
Recreational fishing specifically on Lake Erie	18	23	11	13	6
Archery activities other than bowhunting	20	0	13	14	11
Trapping	4	0	6	7	6

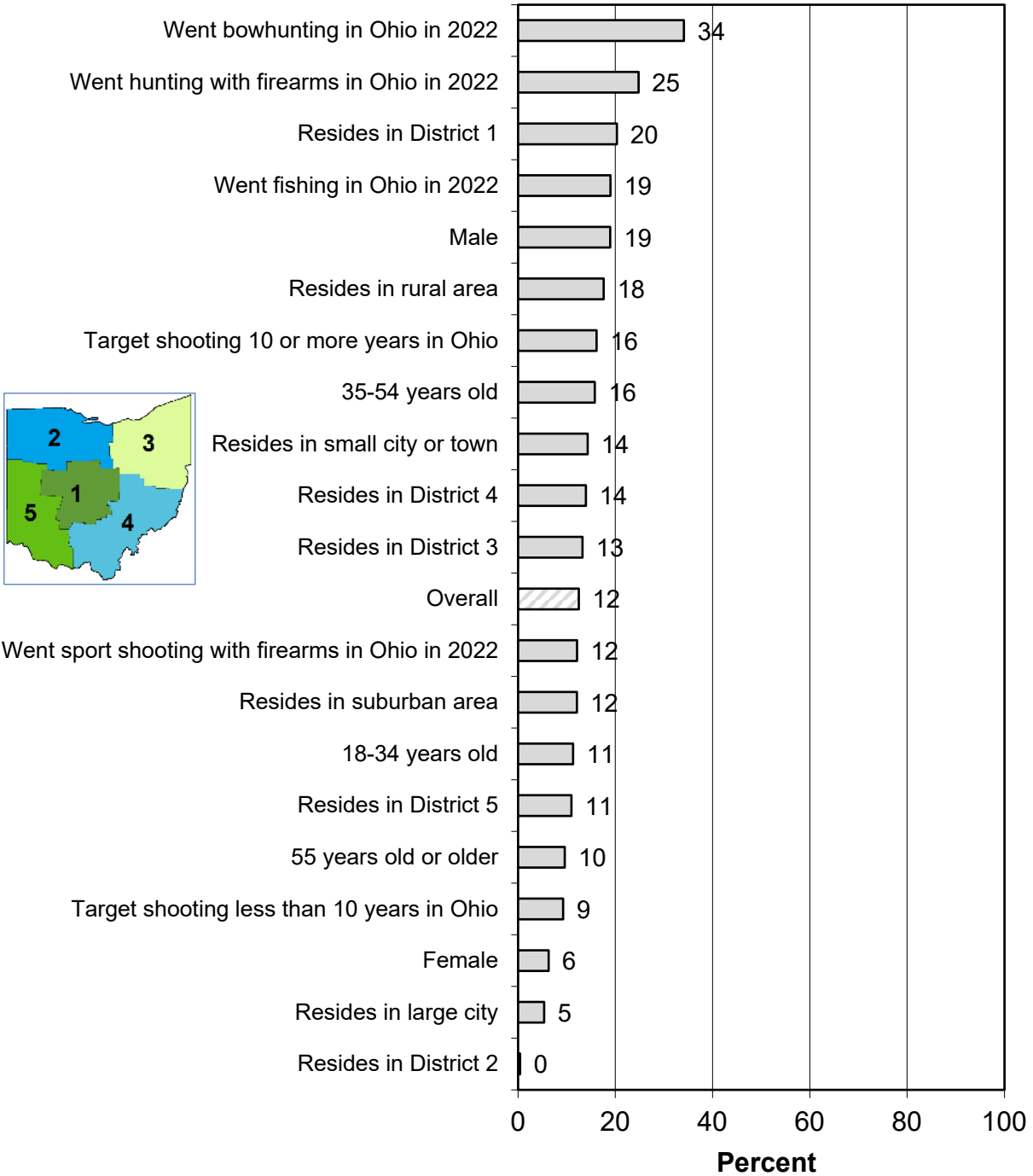


Demographic-participatory graphs are shown for those who participated in sport shooting, target archery, fishing, hunting with firearms, and bowhunting.

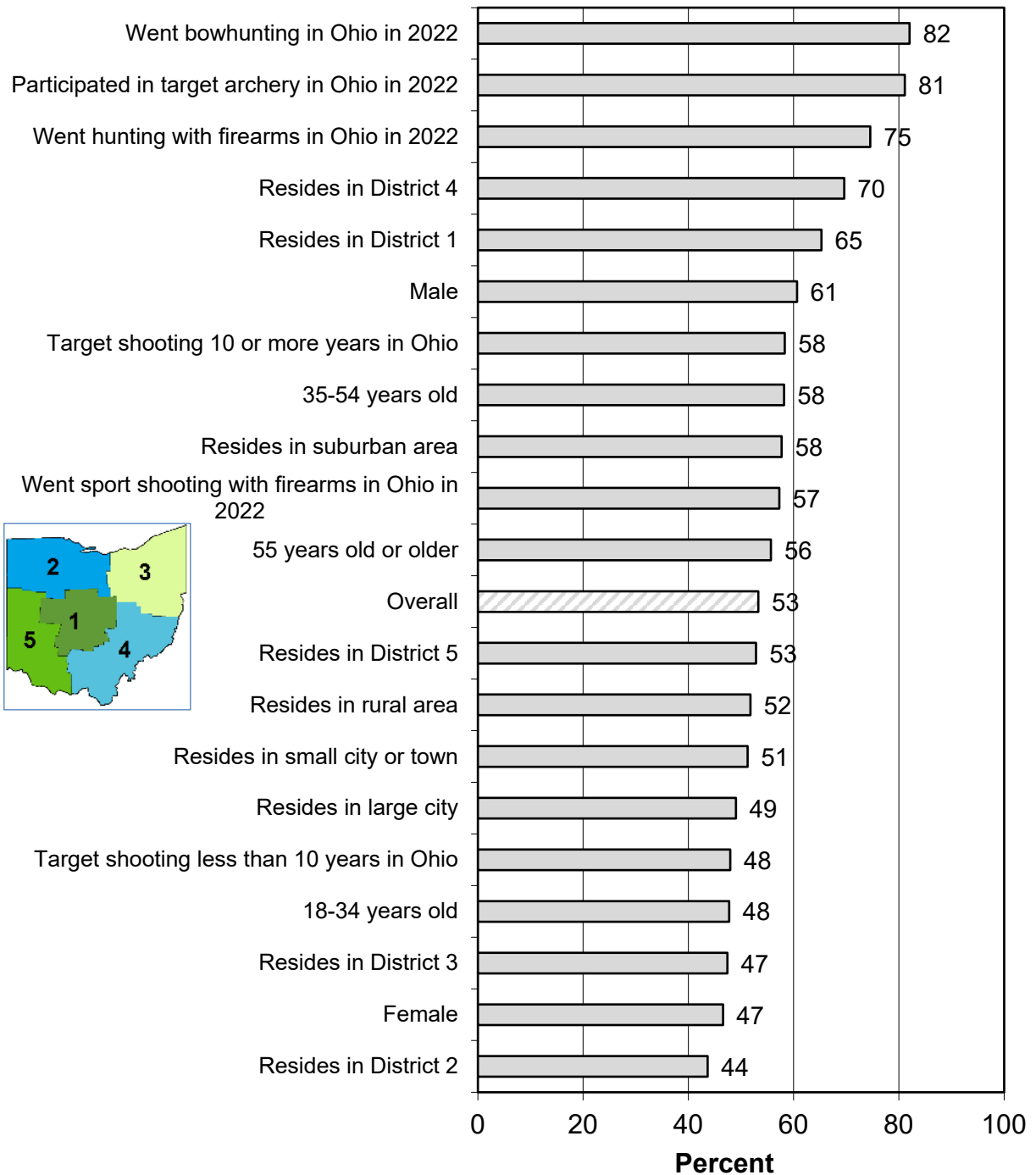
Percent of each of the following groups who went target or sport shooting in Ohio in 2022: (Sport shooters)



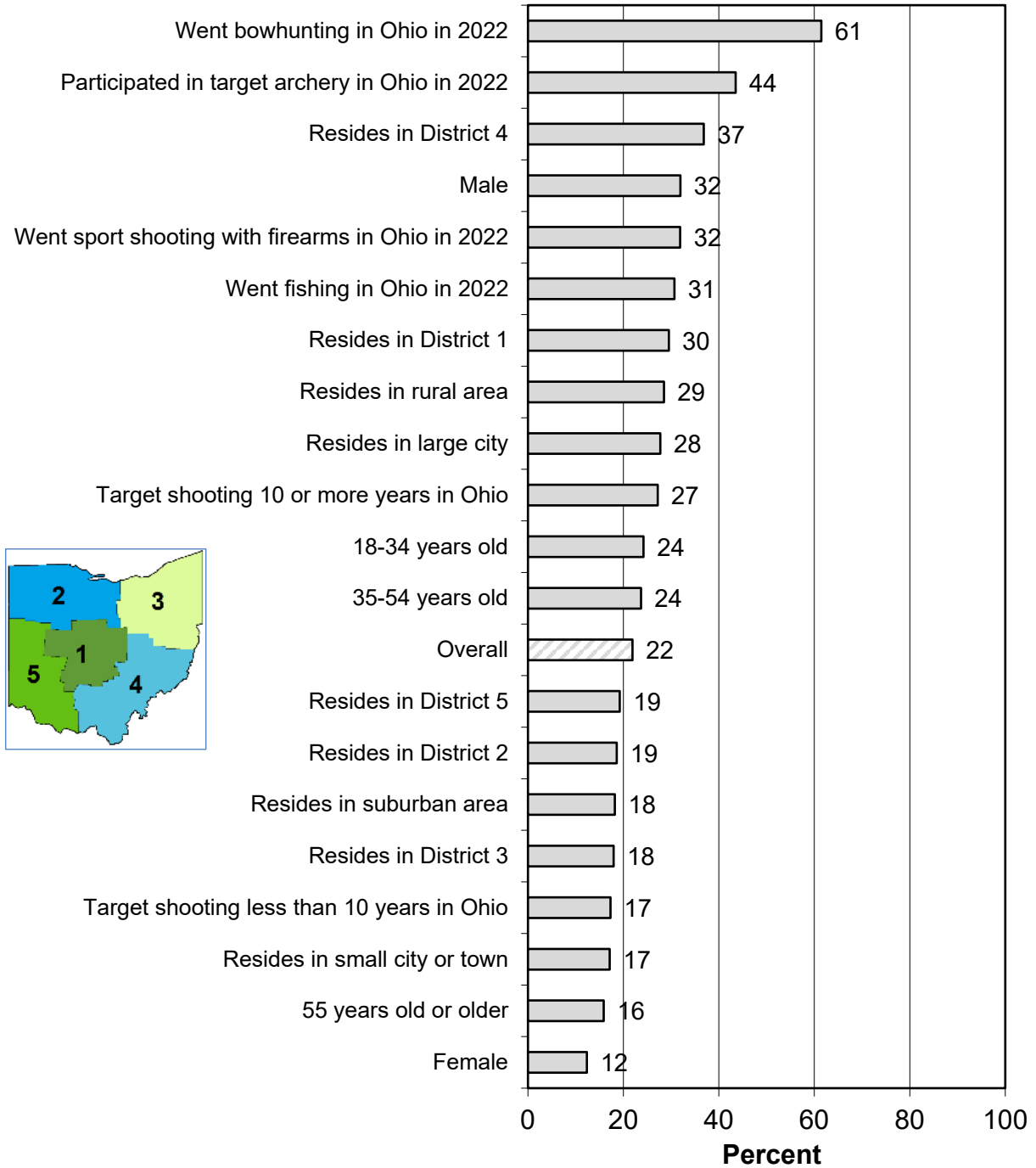
Percent of each of the following groups who participated in target archery in Ohio in 2022: (Sport shooters)



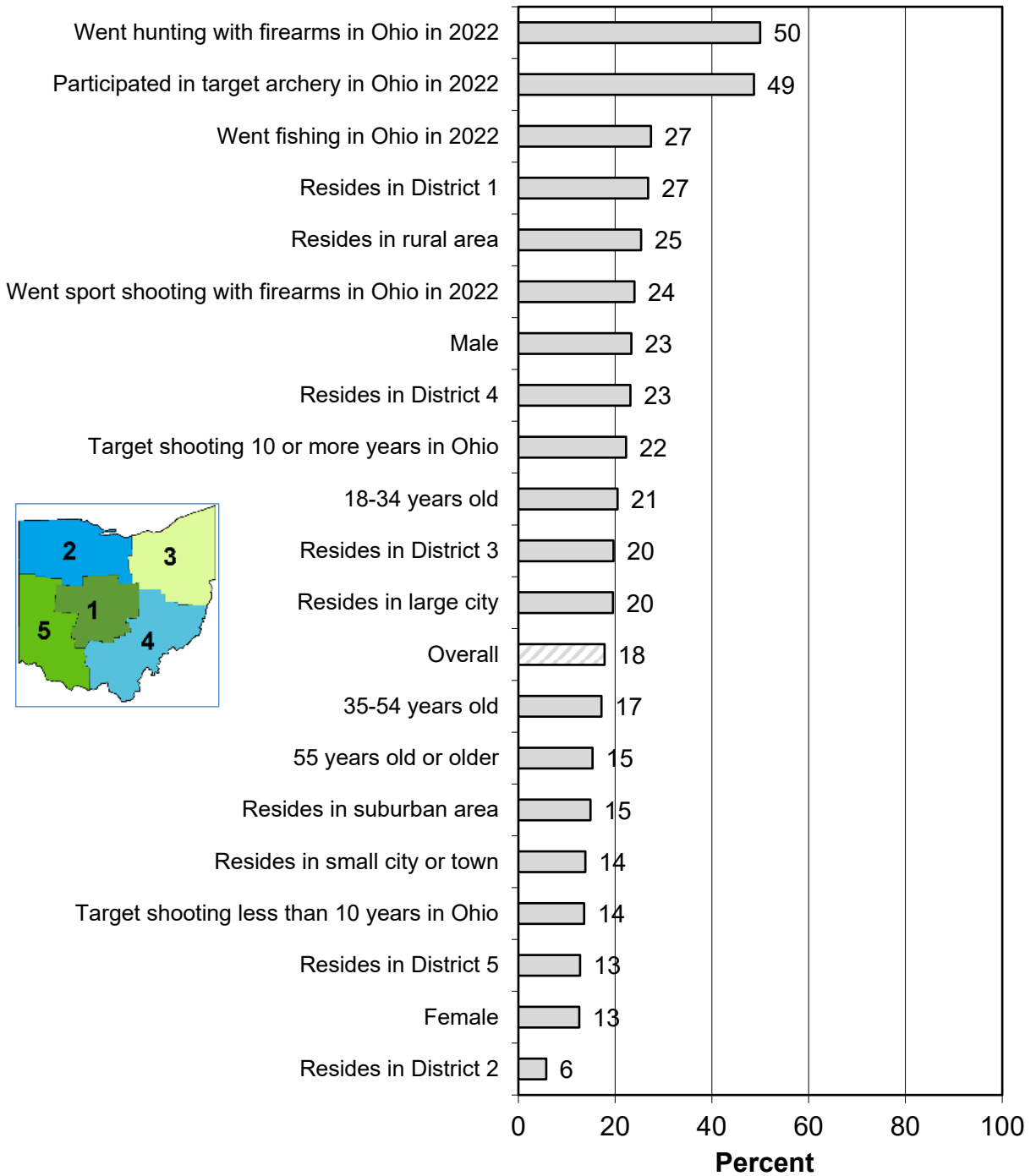
Percent of each of the following groups who went fishing in Ohio in 2022: (Sport shooters)



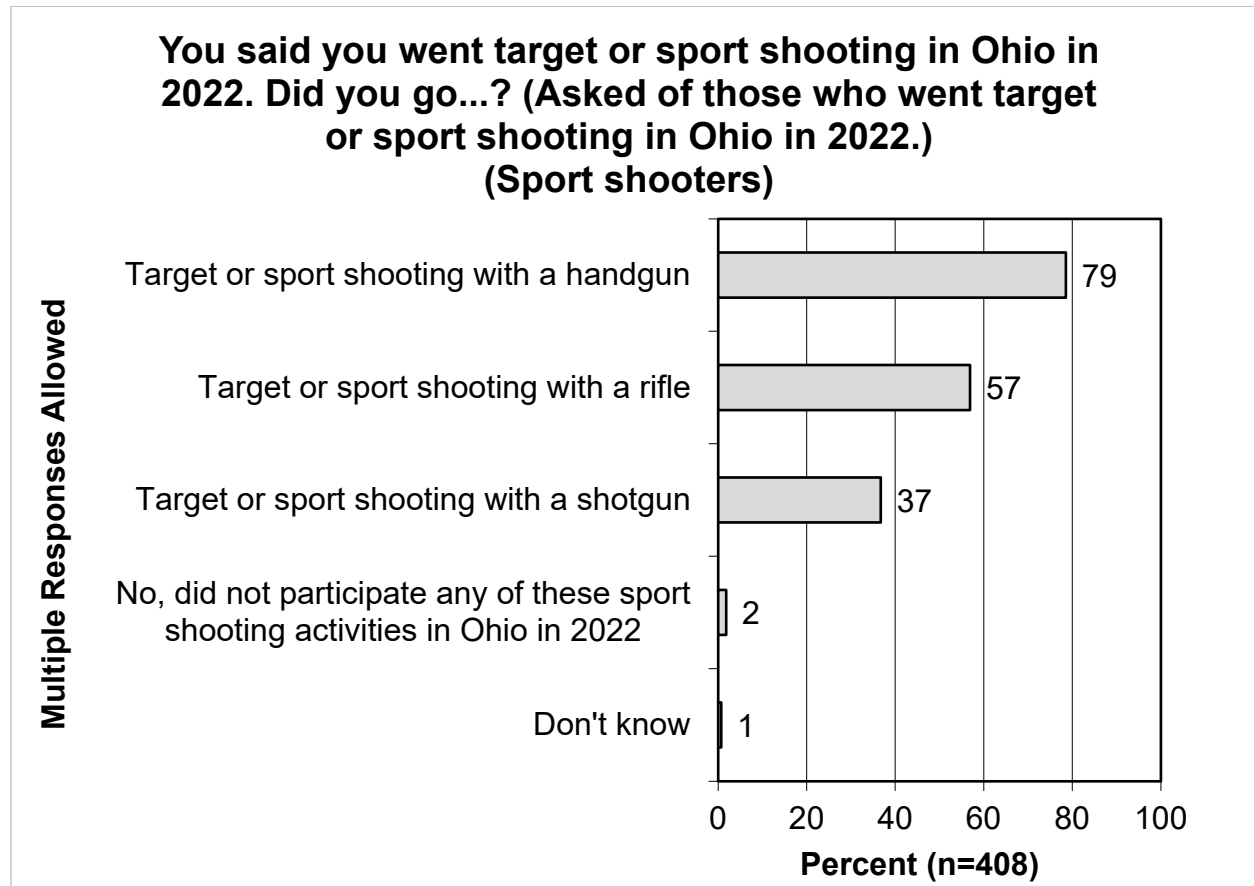
Percent of each of the following groups who went hunting with firearms in Ohio in 2022: (Sport shooters)



Percent of each of the following groups who went bowhunting in Ohio in 2022: (Sport shooters)

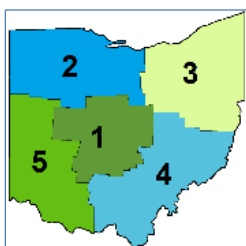


Among those who went sport shooting in 2022, 79% shot with a handgun, 57% shot with a rifle, and 37% shot with a shotgun.



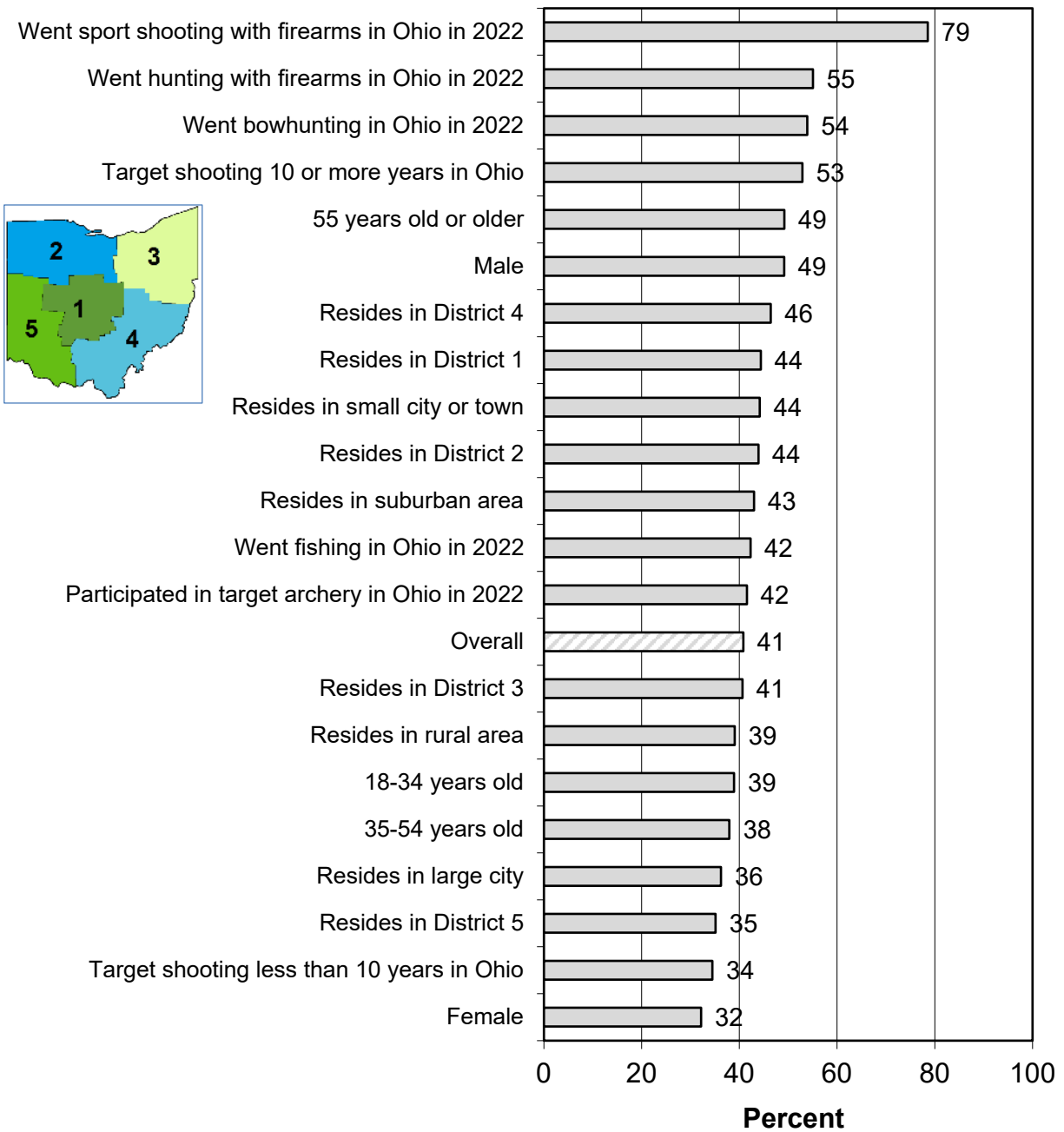
You said you went target or sport shooting in Ohio in 2022. Did you go...? (Asked of those who went sport shooting in Ohio in 2022.) (Multiple Responses Allowed) (Sport shooters)

Percentages	District 1	District 2	District 3	District 4	District 5
Target or sport shooting with a handgun	86	80	76	87	73
Target or sport shooting with a rifle	69	44	57	66	52
Target or sport shooting with a shotgun	55	11	35	40	38
No, did not participate any of these sport shooting activities in Ohio in 2022	0	0	4	4	0
Don't know	0	5	0	0	0

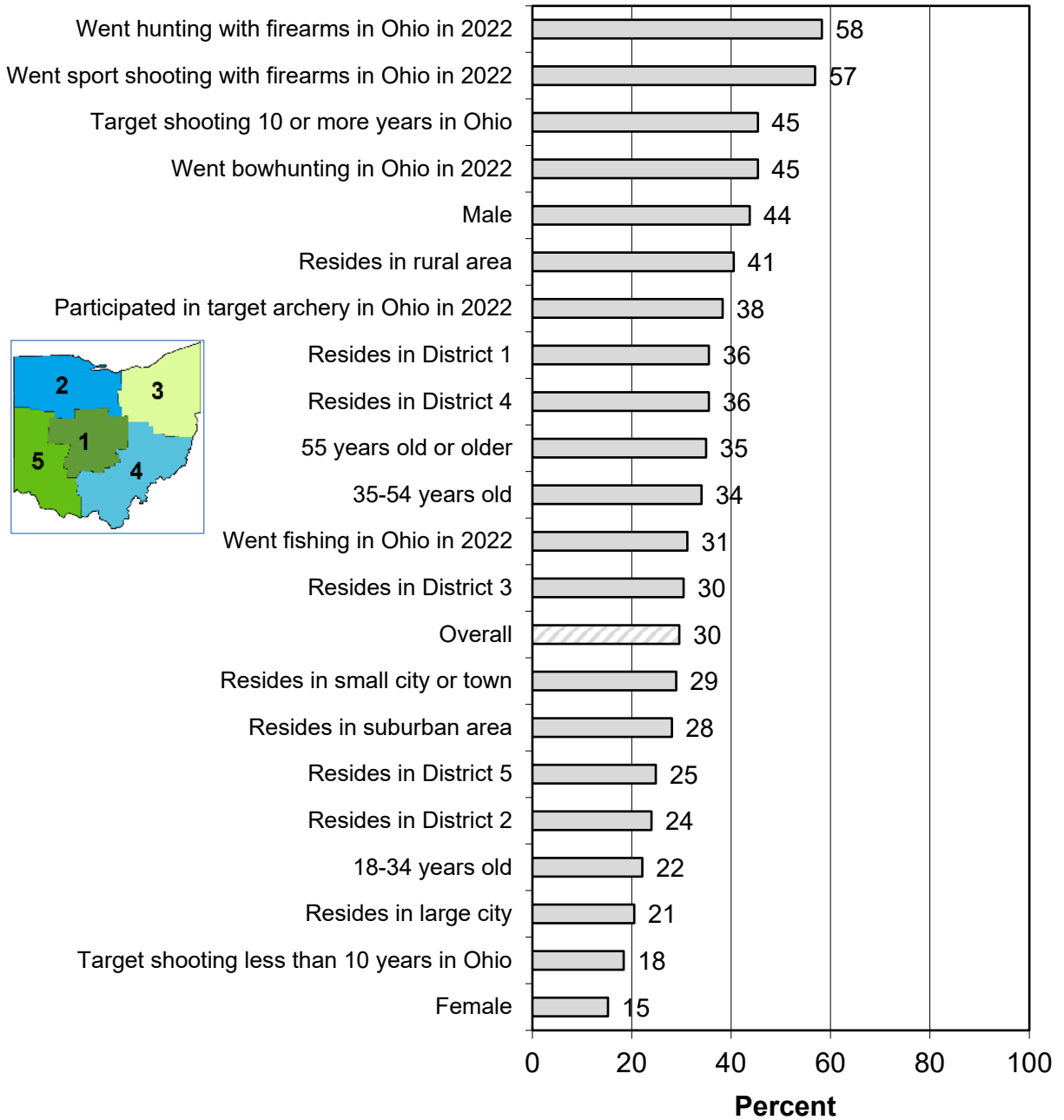


Demographic-participatory graphs are shown for the types of sport shooting asked about in the previous question. The question was asked of those who shot in 2022, although these graphs are shown out of all respondents.

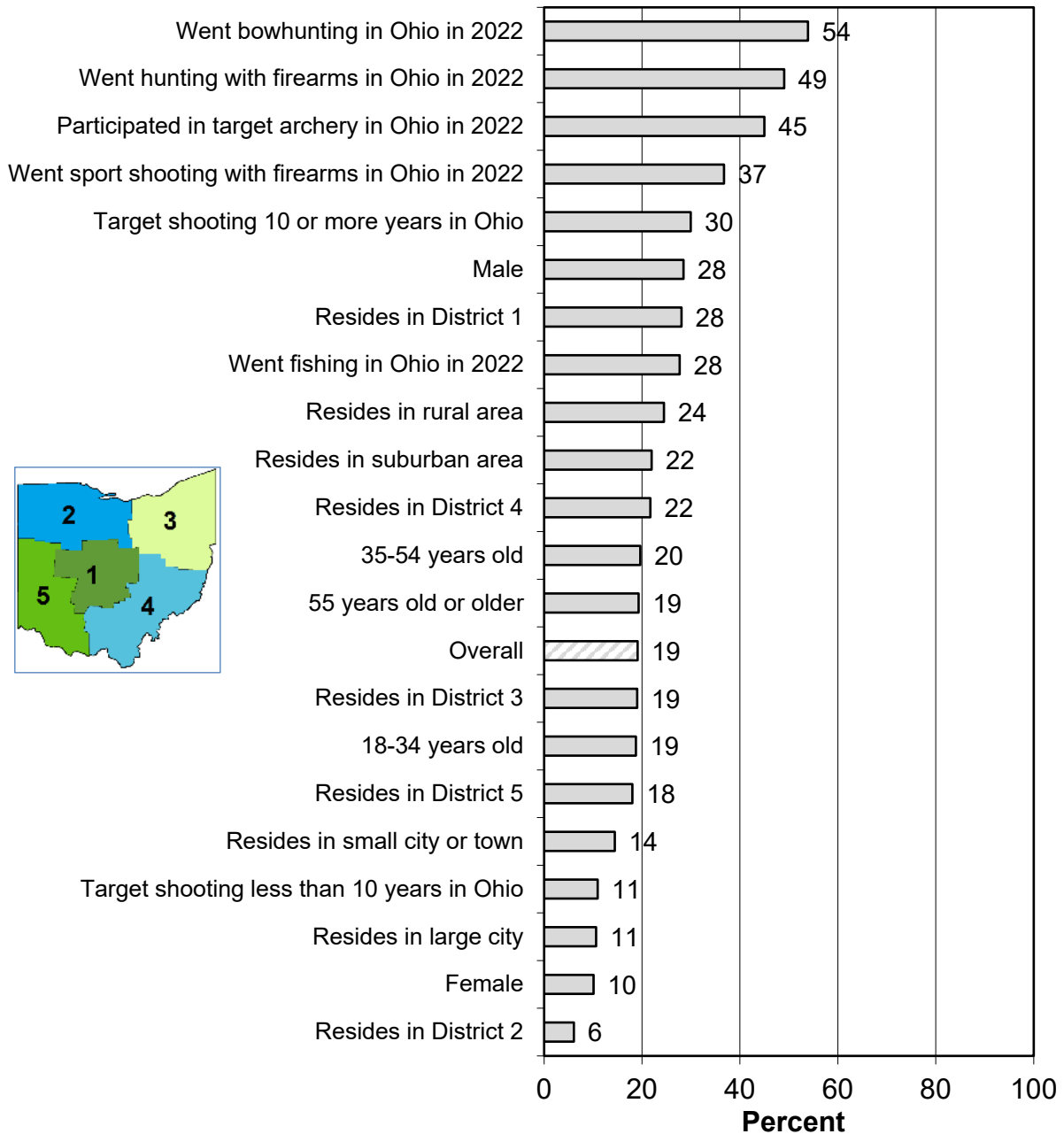
Percent of each of the following groups who went target shooting with a handgun in Ohio in 2022: (Asked of those who shot in 2022; shown out of all respondents.) (Sport shooters)



Percent of each of the following groups who went target shooting with a rifle in Ohio in 2022: (Asked of those who shot in 2022; shown out of all respondents.) (Sport shooters)

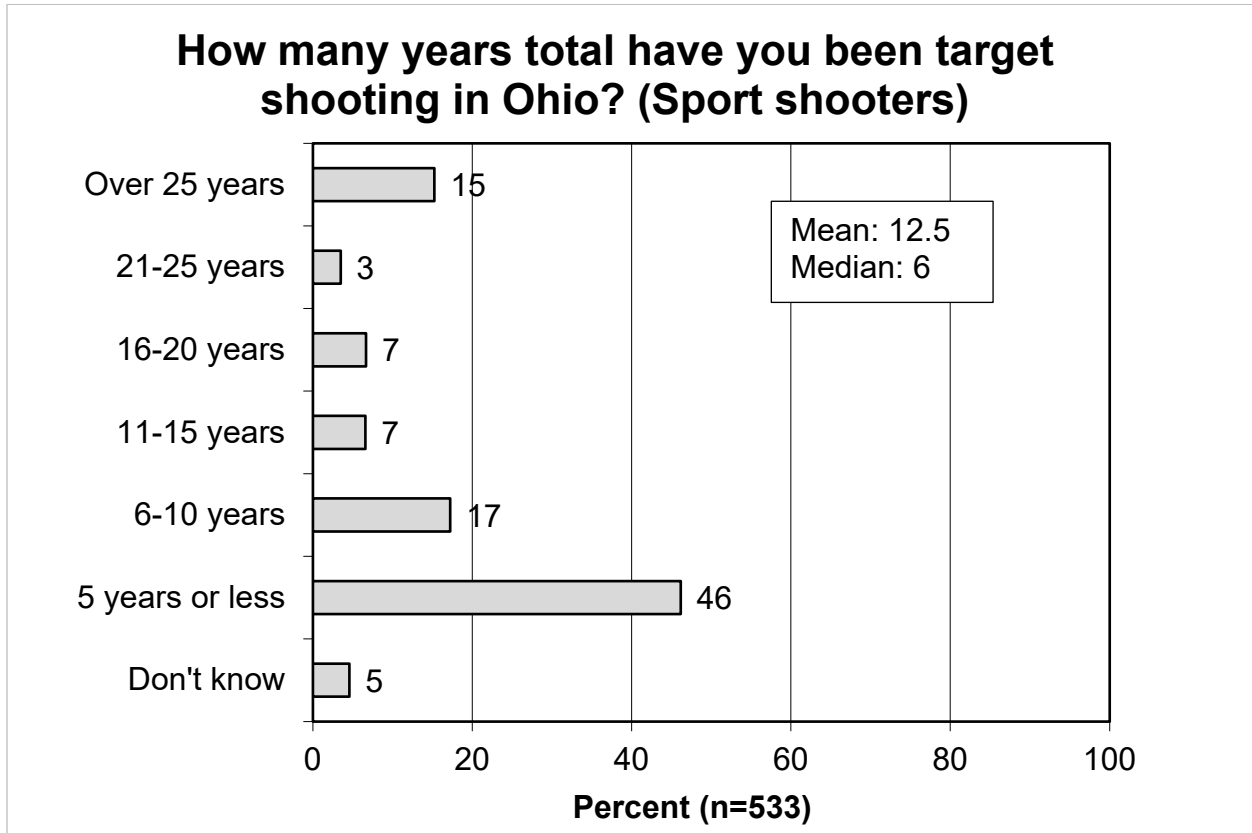


Percent of each of the following groups who went target shooting with a shotgun in Ohio in 2022: (Asked of those who shot in 2022; shown out of all respondents.) (Sport shooters)

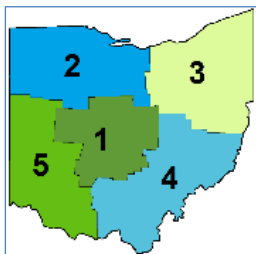


SPORT SHOOTING PARTICIPATION

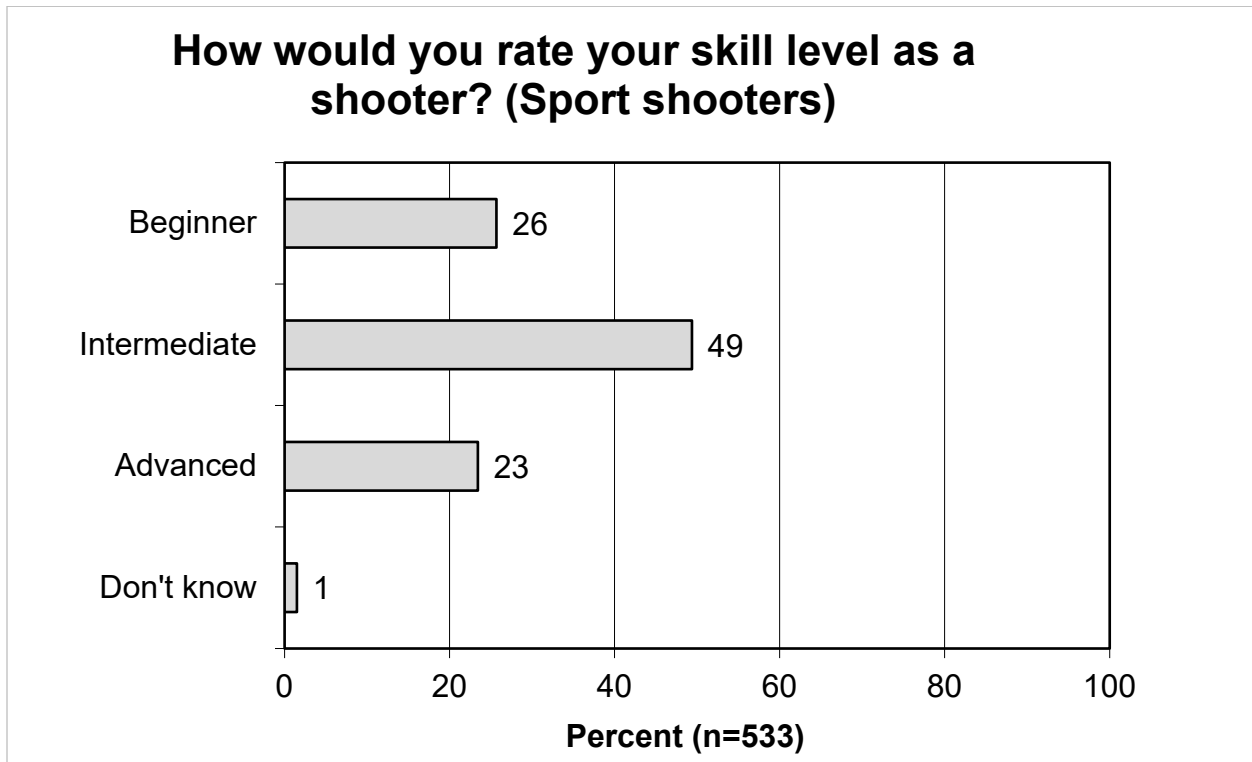
Almost half of shooters (46%) have been shooting in Ohio for 5 years or less; the mean is 12.5 years and the median is 6 years.



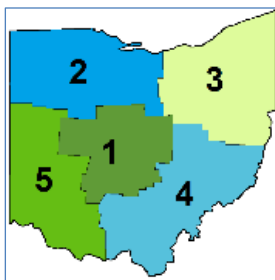
How many years total have you been target shooting in Ohio? (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Over 25 years	16	13	16	8	17
21-25 years	5	0	4	7	2
16-20 years	5	13	9	14	0
11-15 years	13	10	5	7	3
6-10 years	11	8	26	16	15
5 years or less	45	56	37	41	57
Don't know	5	0	4	9	6
Mean years	13.1	11.4	13.3	11.7	11.5
Median years	10	5	7	8	5



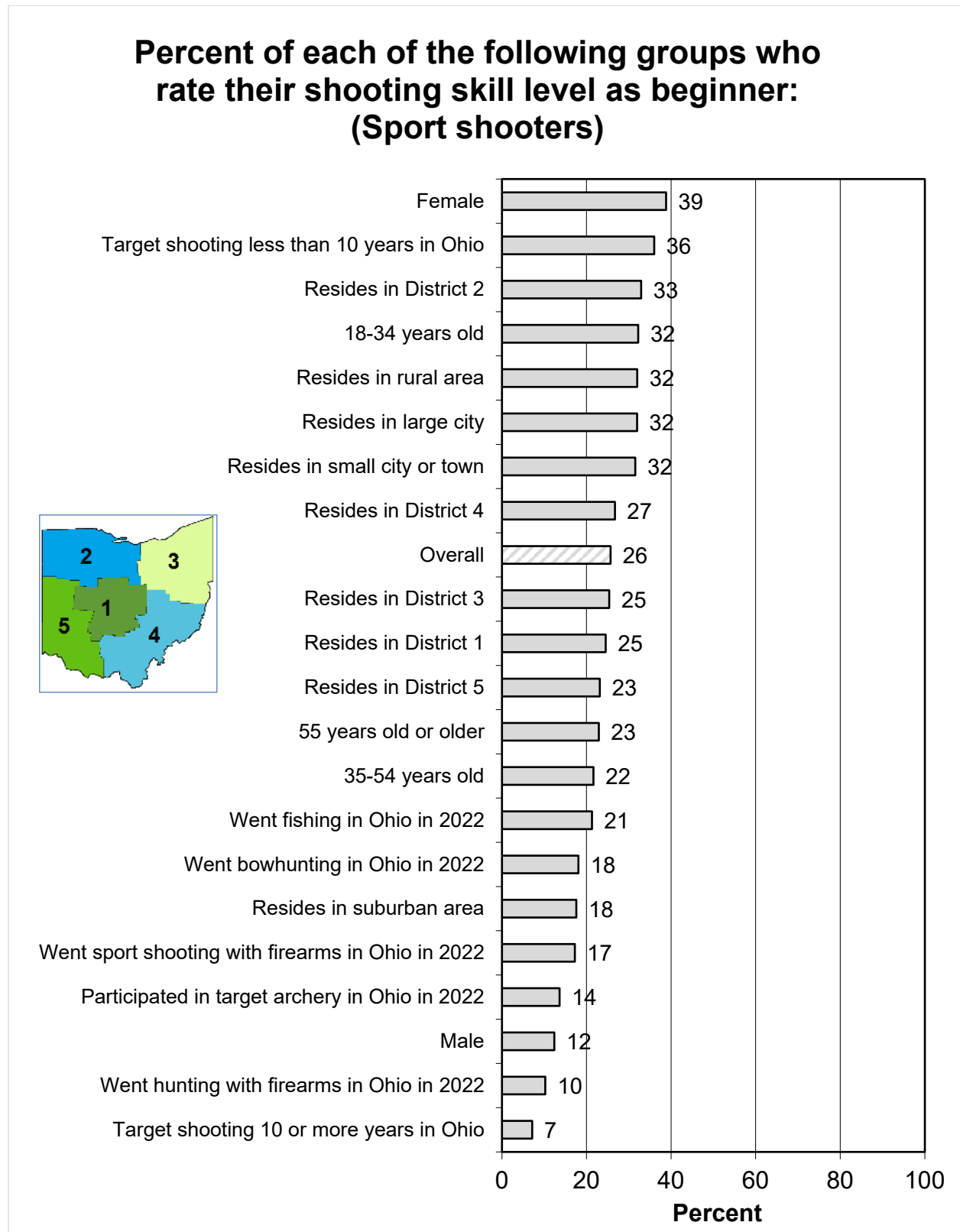
About half of shooters (46%) consider themselves to be at an intermediate skill level, while 26% are beginners and 23% are advanced.



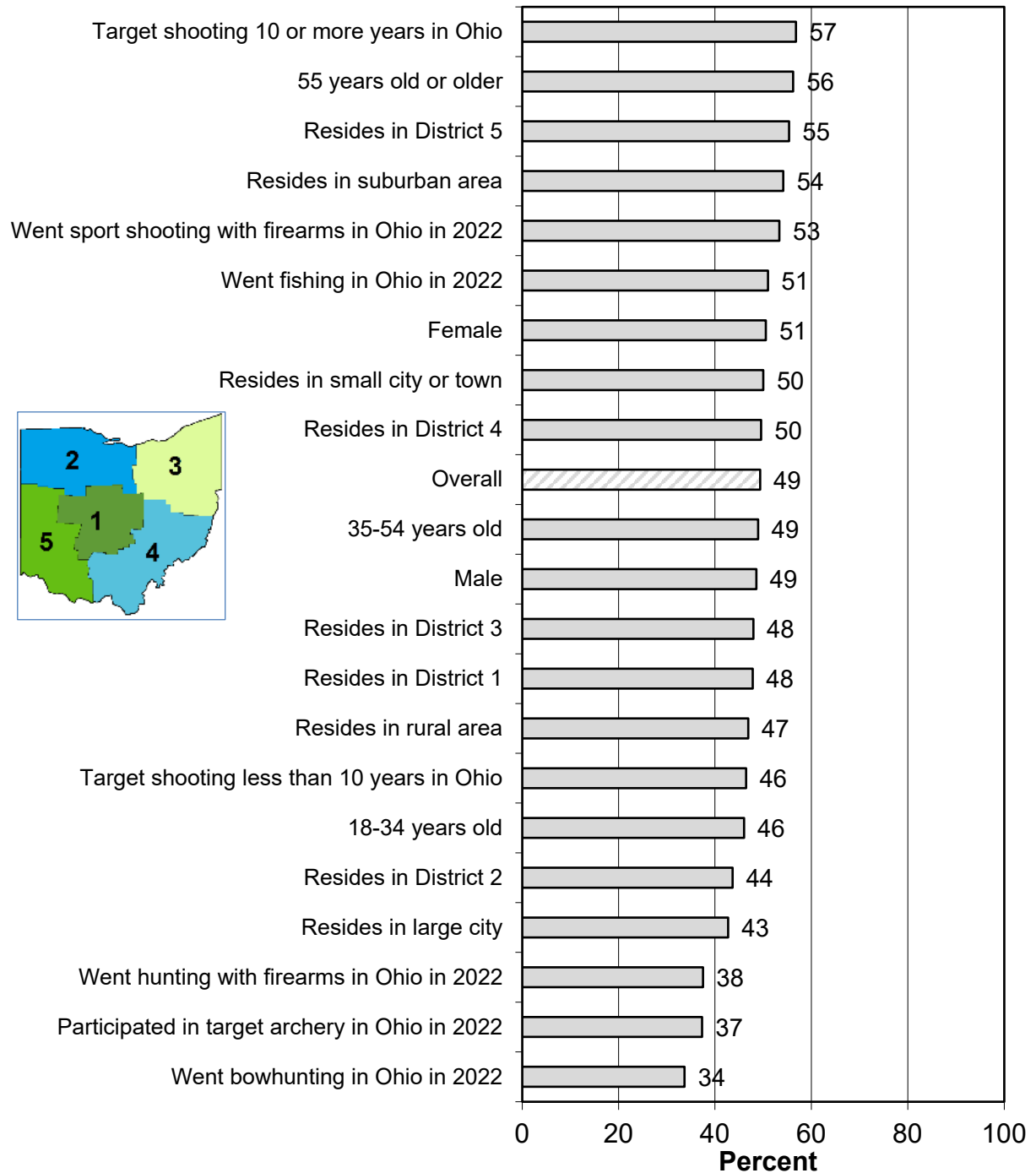
How would you rate your skill level as a shooter? (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Beginner	25	33	25	27	23
Intermediate	48	44	48	50	55
Advanced	25	23	27	24	17
Don't know	2	0	0	0	4



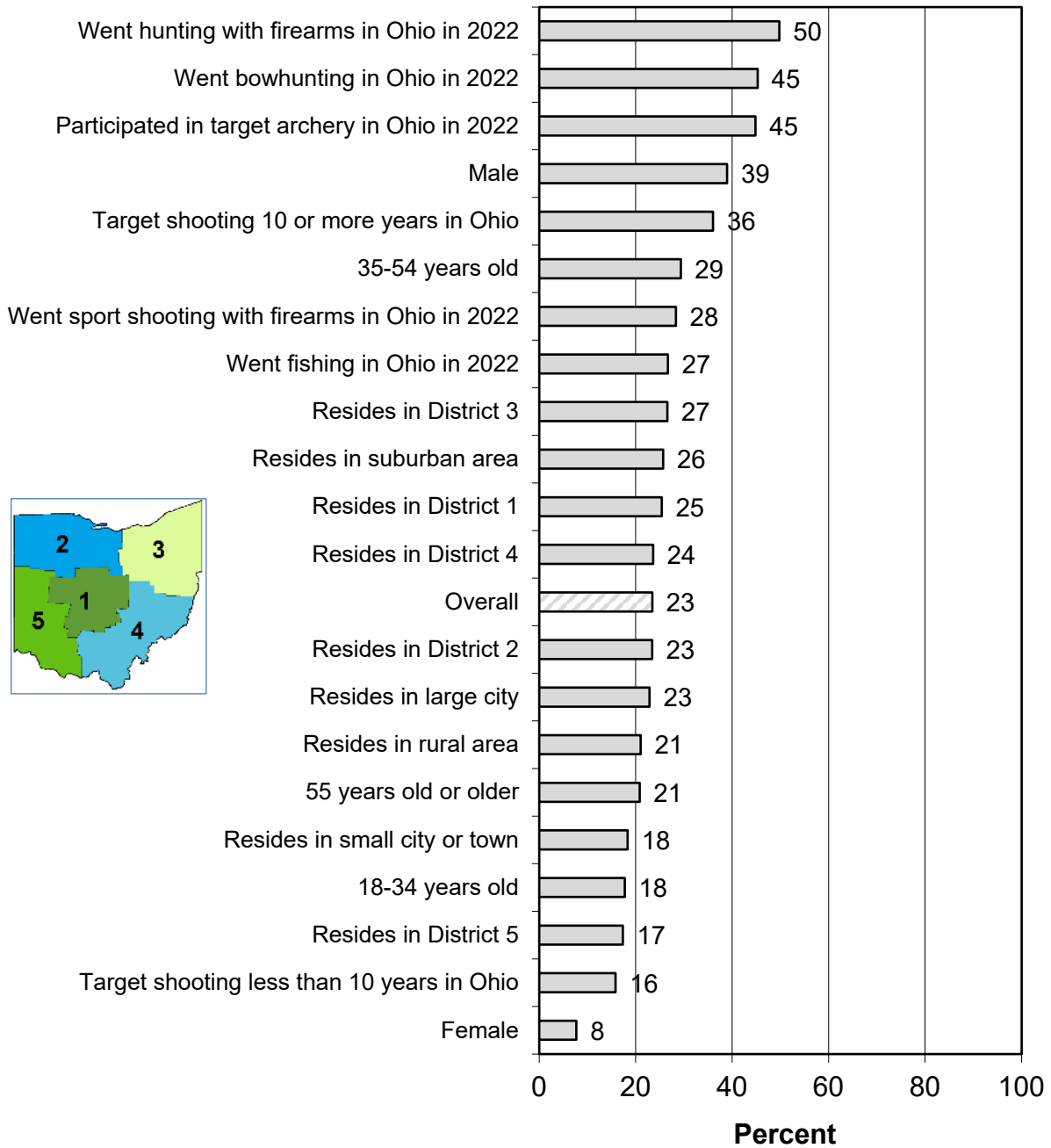
Demographic-participatory graphs are shown for each of the three skill levels.



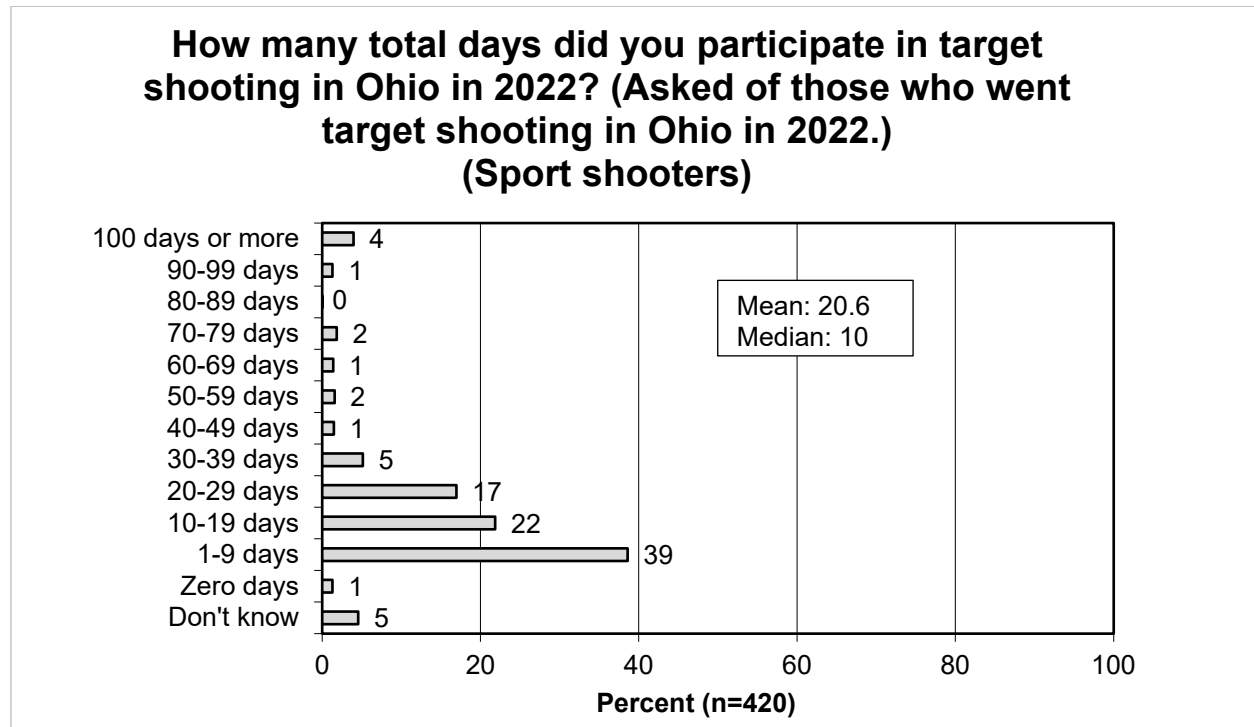
Percent of each of the following groups who rate their shooting skill level as intermediate: (Sport shooters)



Percent of each of the following groups who rate their shooting skill level as advanced: (Sport shooters)

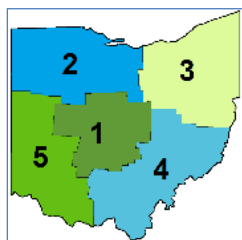


Among those who shot in 2022, 40% shot less than 10 days. The mean number of days was 20.6 and the median was 10.

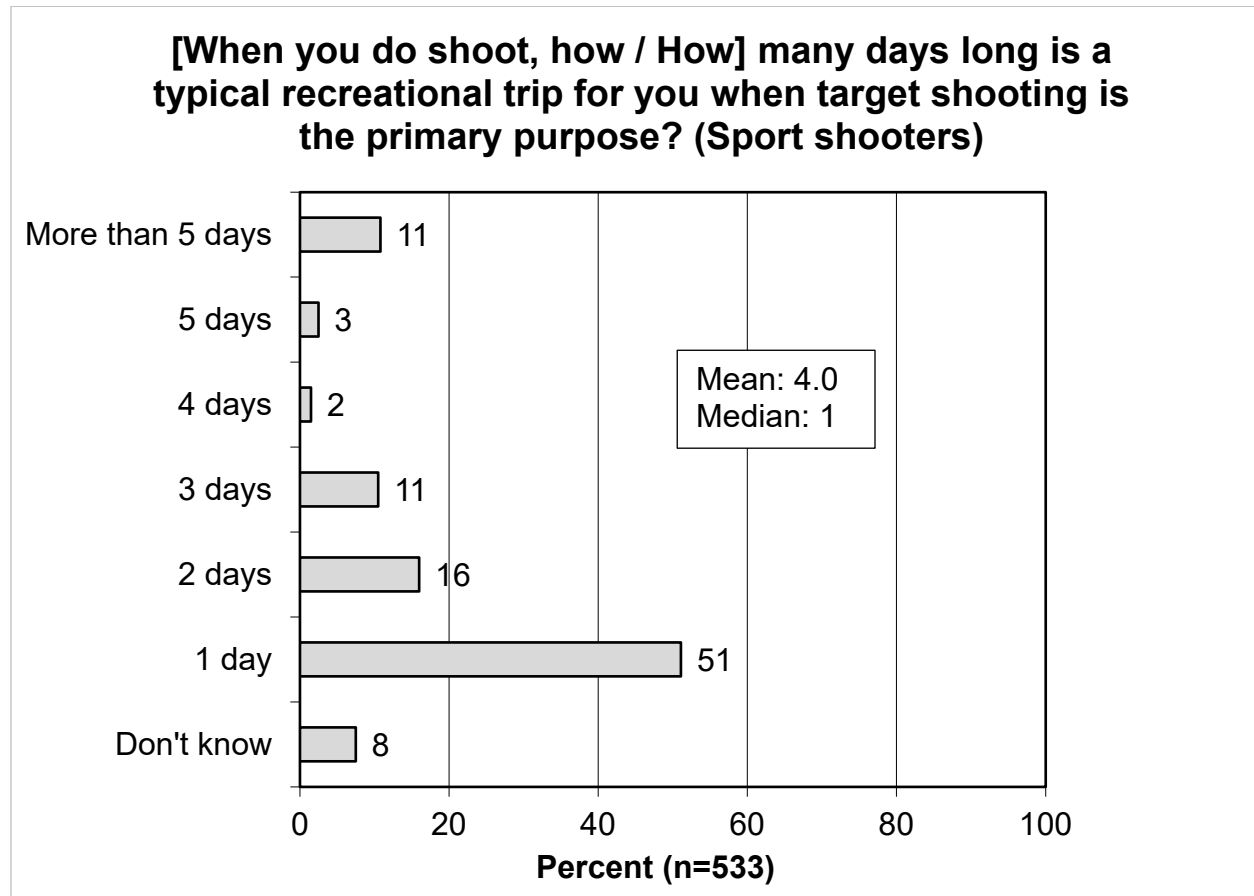


How many total days did you participate in target shooting in Ohio in 2022? (Asked of those who went sport shooting in Ohio in 2022.) (Sport shooters)

Percentages	District 1	District 2	District 3	District 4	District 5
100 days or more	4	9	0	4	8
90-99 days	0	0	3	0	0
80-89 days	0	0	0	0	0
70-79 days	0	5	3	0	0
60-69 days	0	0	3	1	0
50-59 days	0	5	0	0	4
40-49 days	0	0	4	0	0
30-39 days	12	5	4	12	0
20-29 days	12	14	25	24	8
10-19 days	24	15	22	20	24
1-9 days	44	48	29	32	48
0 days	0	0	3	0	0
Don't know	4	0	4	8	8
Mean days	16.6	23.3	20.2	19.1	23.5
Median days	10	10	12	10	9

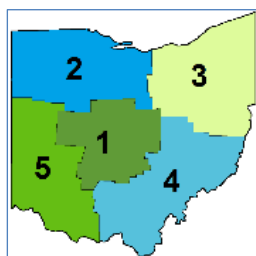


About half of shooters (51%) typically have a 1-day trip for the primary purpose of sport shooting.



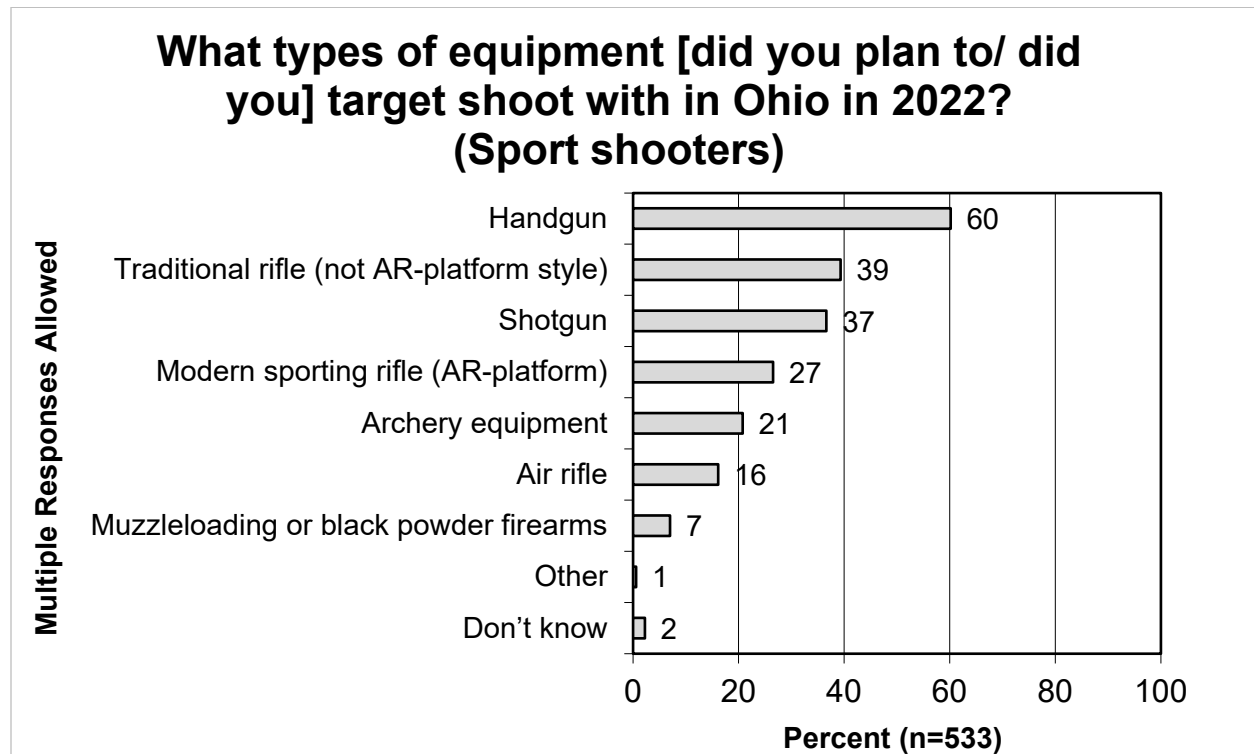
[When you do shoot, how / How] many days long is a typical recreational trip for you when target shooting is the primary purpose? (Sport shooters)

Percentages	District 1	District 2	District 3	District 4	District 5
More than 5 days	9	10	15	5	8
5 days	2	5	2	2	2
4 days	4	0	0	2	2
3 days	7	13	4	13	21
2 days	18	20	19	9	10
1 day	56	49	49	56	50
Don't know	5	3	11	13	6
Mean days	5.8	3.6	4.1	2.9	2.7
Median days	1	1	1	1	1

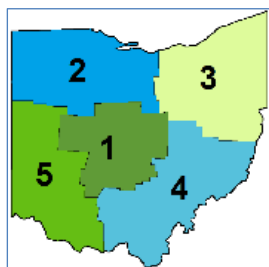


SHOOTING ACTIVITIES AND FIREARMS USED

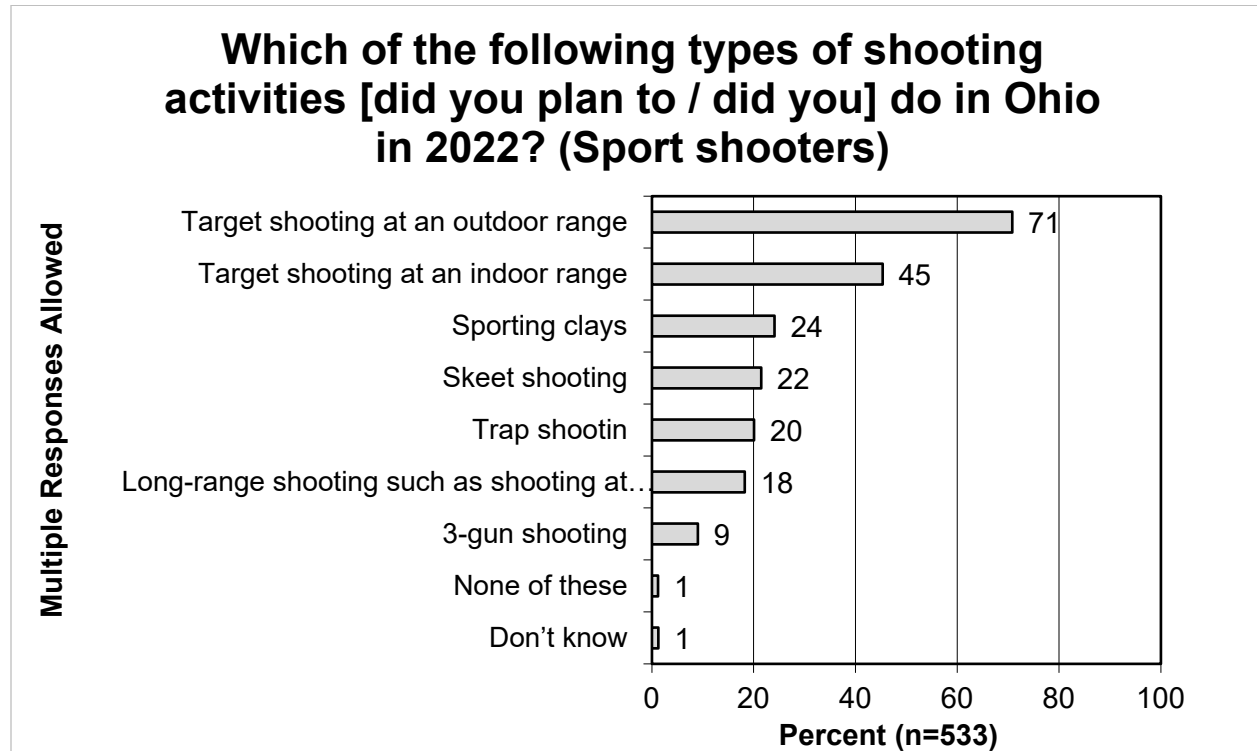
A majority of shooters (60%) shoot with a handgun, whereas 39% shoot with a traditional rifle (non-AR platform) and 37% shoot with a shotgun.



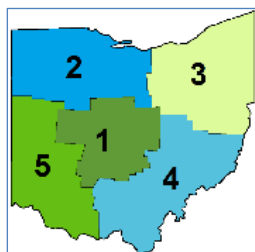
What types of equipment [did you plan to/ did you] target shoot with in Ohio in 2022? (Multiple Responses Allowed) (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Handgun	64	54	58	66	62
Traditional rifle (not AR-platform style)	35	34	49	44	31
Shotgun	48	29	38	42	29
Modern sporting rifle (AR-platform)	44	26	21	28	20
Archery equipment	38	13	15	21	19
Air rifle	27	13	15	18	11
Muzzleloading or black powder firearms	9	10	7	12	2
Other	0	0	0	0	2
Don't know	0	0	4	2	2



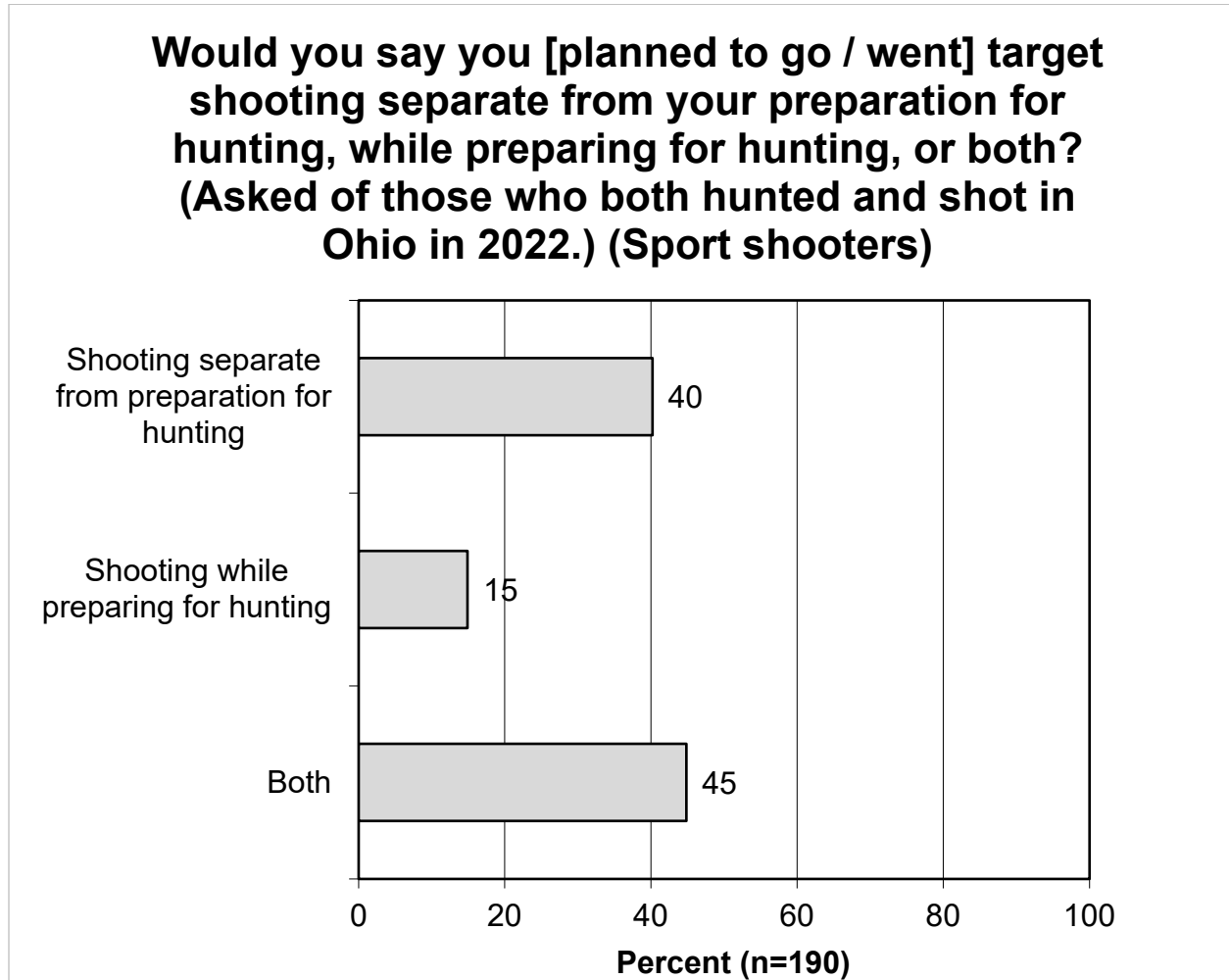
Shooters most frequently shoot at an outdoor range (71%) do so, while 45% shoot at an indoor range. This is followed by nearly a quarter who participate in shotgun-related activities: sporting clays, skeet shooting, and trap shooting.



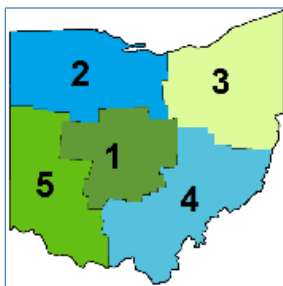
Which of the following types of shooting activities [did you plan to/ did you] do in Ohio in 2022? (Multiple Responses Allowed) (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Target shooting at an outdoor range	75	69	72	76	64
Target shooting at an indoor range	46	51	46	23	47
Sporting clays	32	11	26	25	21
Skeet shooting	25	20	26	22	13
Trap shooting	27	13	18	22	21
Long-range shooting such as shooting at targets more than 500 yards away	25	15	17	23	15
3-gun shooting	7	3	11	13	11
Don't know	0	0	2	0	2
None of these	2	3	0	7	0



Among those who both hunted and shot in 2022, 40% shot separate from preparation for hunting, 15% shot in preparation for hunting, and 45% did both.

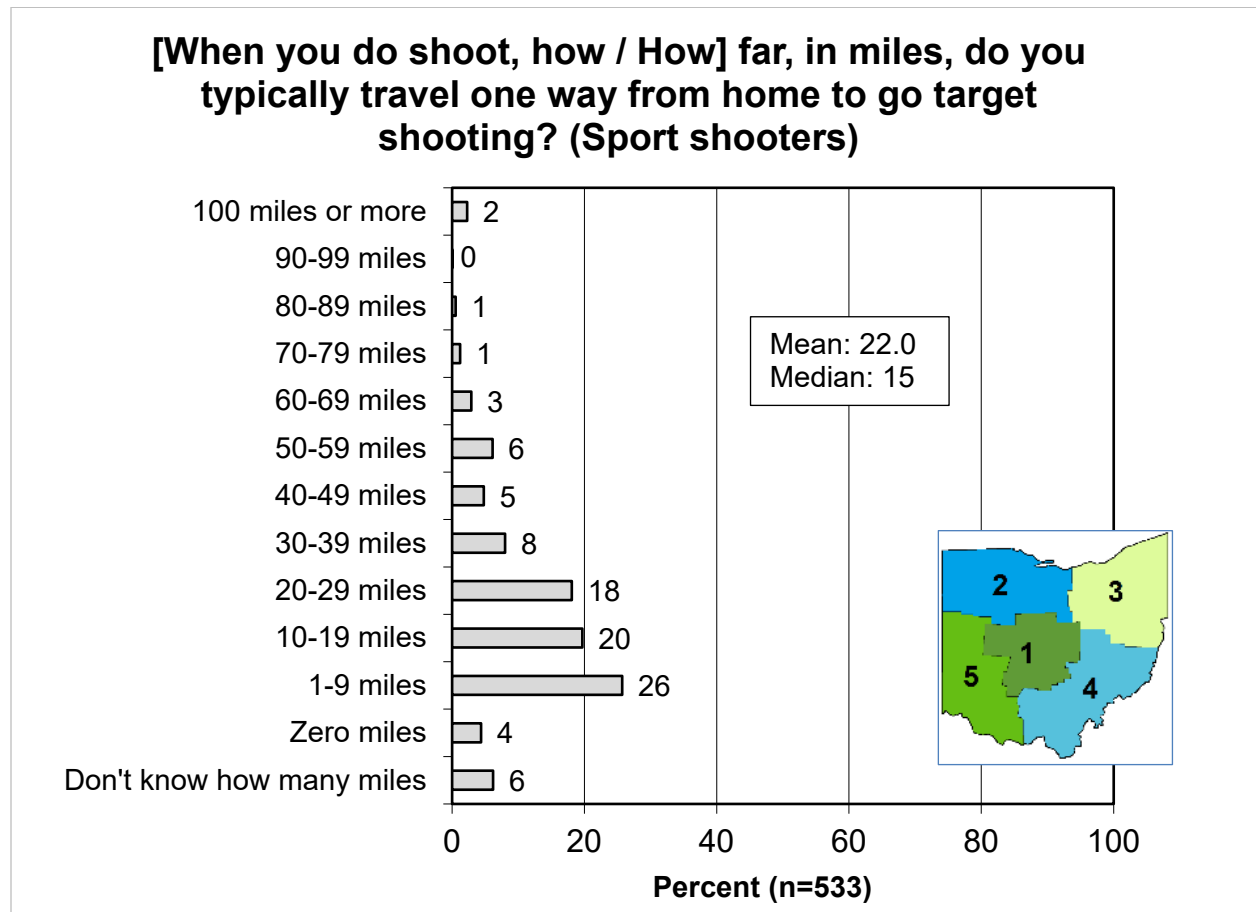


Would you say you [planned to go / went] target shooting separate from your preparation for hunting, while preparing for hunting, or both? (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Shooting separate from preparation for hunting	26	33	44	48	54
Shooting while preparing for hunting	6	22	9	27	27
Both	68	45	47	24	19



SPORT SHOOTING LOCATIONS

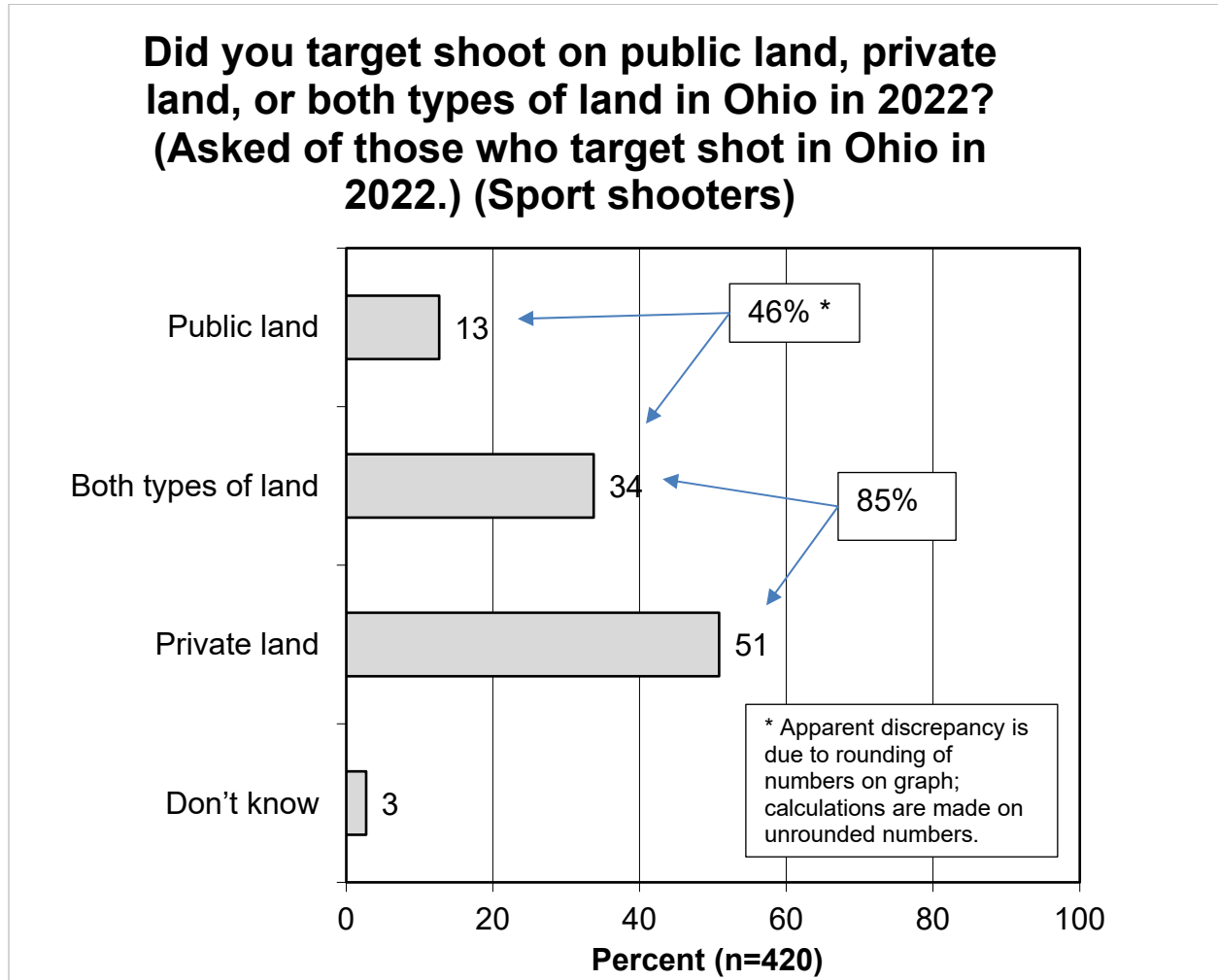
Nearly a third of shooters travel less than 10 miles to shoot; the mean distance is 22.0 miles and the median is 15 miles.



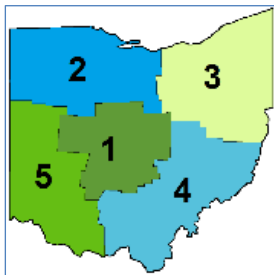
[When you do go shooting, how / How] far, in miles, do you typically travel one way from home to go target shooting? (Sport shooters)

Percentages	District 1	District 2	District 3	District 4	District 5
100 miles or more	2	3	2	2	2
90-99 miles	0	0	0	0	0
80-89 miles	0	0	0	0	2
70-79 miles	2	0	2	0	0
60-69 miles	7	0	3	2	2
50-59 miles	7	10	3	0	10
40-49 miles	7	0	5	2	6
30-39 miles	11	0	13	7	2
20-29 miles	14	18	22	21	15
10-19 miles	18	8	22	23	23
1-9 miles	20	43	21	27	27
0 miles	4	10	2	7	4
Don't know how many miles	7	8	6	9	4
Mean miles	25.9	15.4	22.9	17.0	22.3
Median miles	20	5	20	14	15

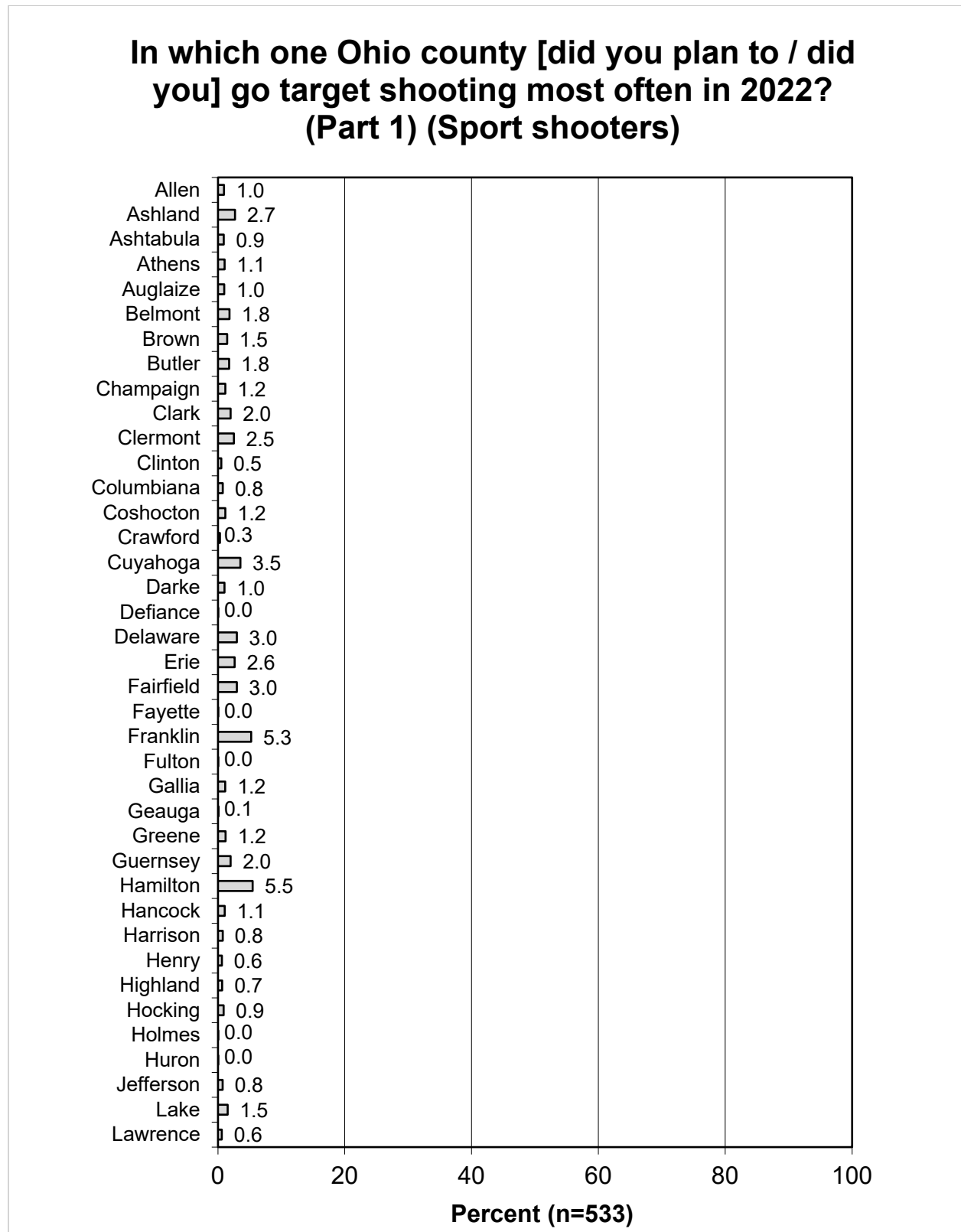
Most shooters (85%) shoot on private land (51% do so exclusively); compared to 46% who shoot on public land (13% do so exclusively).



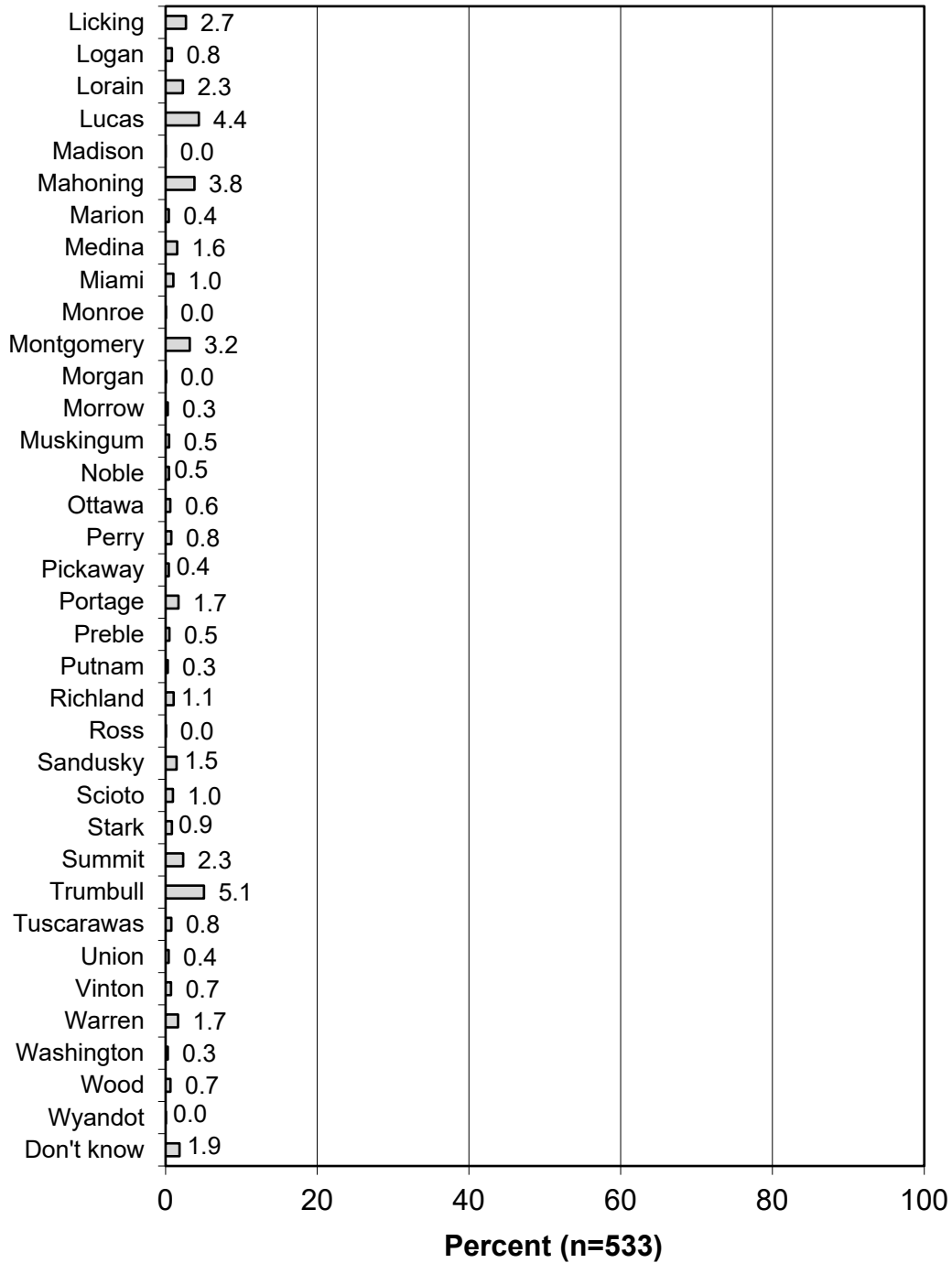
Did you target shoot on public land, private land, or both types of land in Ohio in 2022? (Asked of those who target shot in Ohio in 2022.) (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Public land	21	5	5	9	24
Private land	23	51	65	62	47
Both types of land	56	34	27	26	29
Don't know	0	9	3	4	0



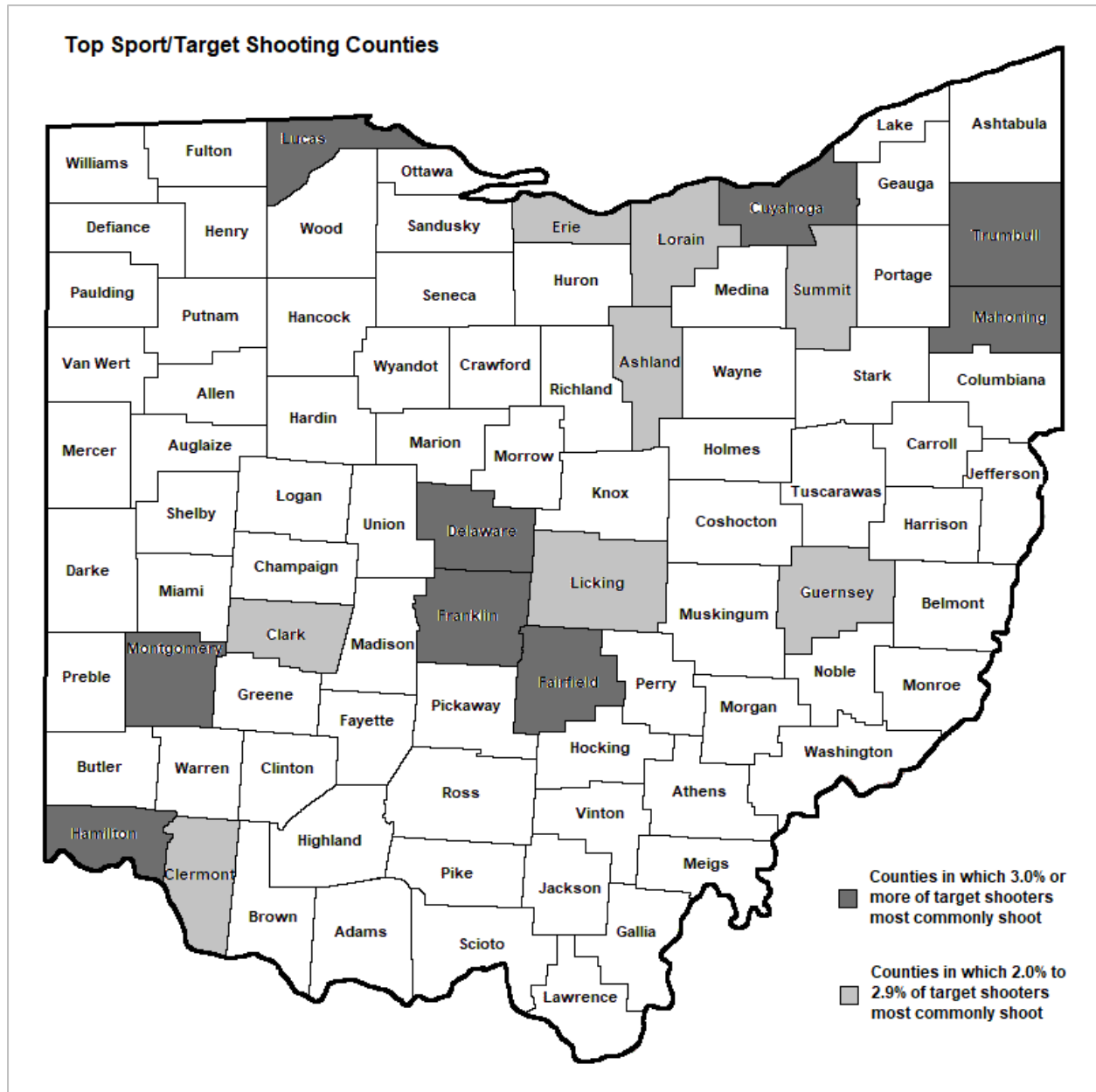
The following graphs show the top sport shooting counties.



**In which one Ohio county [did you plan to / did you] go target shooting most often in 2022?
(Part 2) (Sport shooters)**



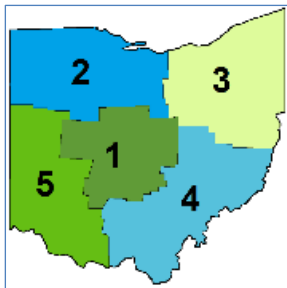
The top counties for shooting are also shown in the map below.



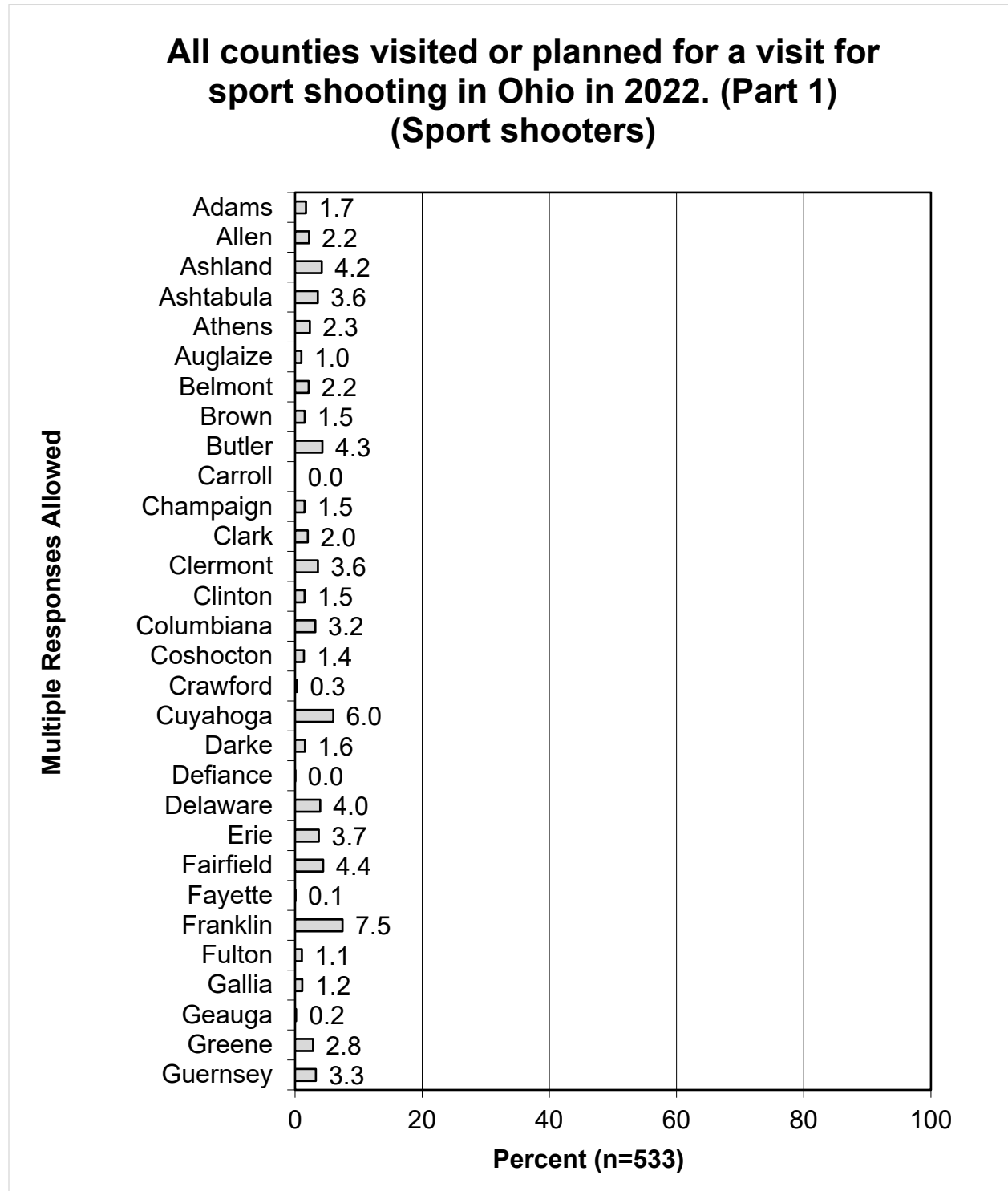
The District breakdown (based on where the shooter lives) is presented in the following table.

In which one Ohio county [did you plan to / did you] go target shooting most often in 2022? (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Allen	0	8	0	0	0
Ashland	2	0	6	0	0
Ashtabula	0	0	2	2	0
Athens	2	0	0	9	0
Auglaize	0	3	0	2	2
Belmont	4	0	0	7	2
Brown	2	0	0	0	4
Butler	2	0	2	0	2
Champaign	2	0	2	0	0
Clark	2	0	0	0	6
Clermont	2	0	0	0	8
Clinton	0	0	0	0	2
Columbiana	0	0	2	0	0
Coshocton	0	0	2	5	0
Crawford	0	3	0	0	0
Cuyahoga	2	0	9	0	0
Darke	0	0	0	0	4
Defiance	0	0	0	0	0
Delaware	15	1	0	0	0
Erie	0	8	4	2	0
Fairfield	7	0	0	2	6
Fayette	0	0	0	0	0
Franklin	18	0	2	0	4
Fulton	0	0	0	0	0
Gallia	4	0	0	4	0
Geauga	0	0	0	0	0
Greene	0	0	0	0	5
Guernsey	0	0	4	7	0
Hamilton	0	0	2	0	19
Hancock	0	3	2	0	0
Harrison	0	0	2	0	0
Henry	0	5	0	0	0
Highland	0	0	0	2	2
Hocking	2	3	0	2	0
Holmes	0	0	0	0	0
Huron	0	0	0	0	0
Jefferson	0	0	2	0	0
Lake	0	0	4	0	0
Lawrence	0	0	0	9	0
Licking	13	0	0	2	0
Logan	4	0	0	0	0
Lorain	0	0	6	0	0
Lucas	0	35	0	0	0
Madison	0	0	0	0	0
Mahoning	0	0	11	0	0
Marion	2	0	0	0	0
Medina	0	0	4	0	0
Miami	0	0	0	0	4
Monroe	0	0	0	0	0
Montgomery	0	0	0	0	13
Morgan	0	0	0	1	0

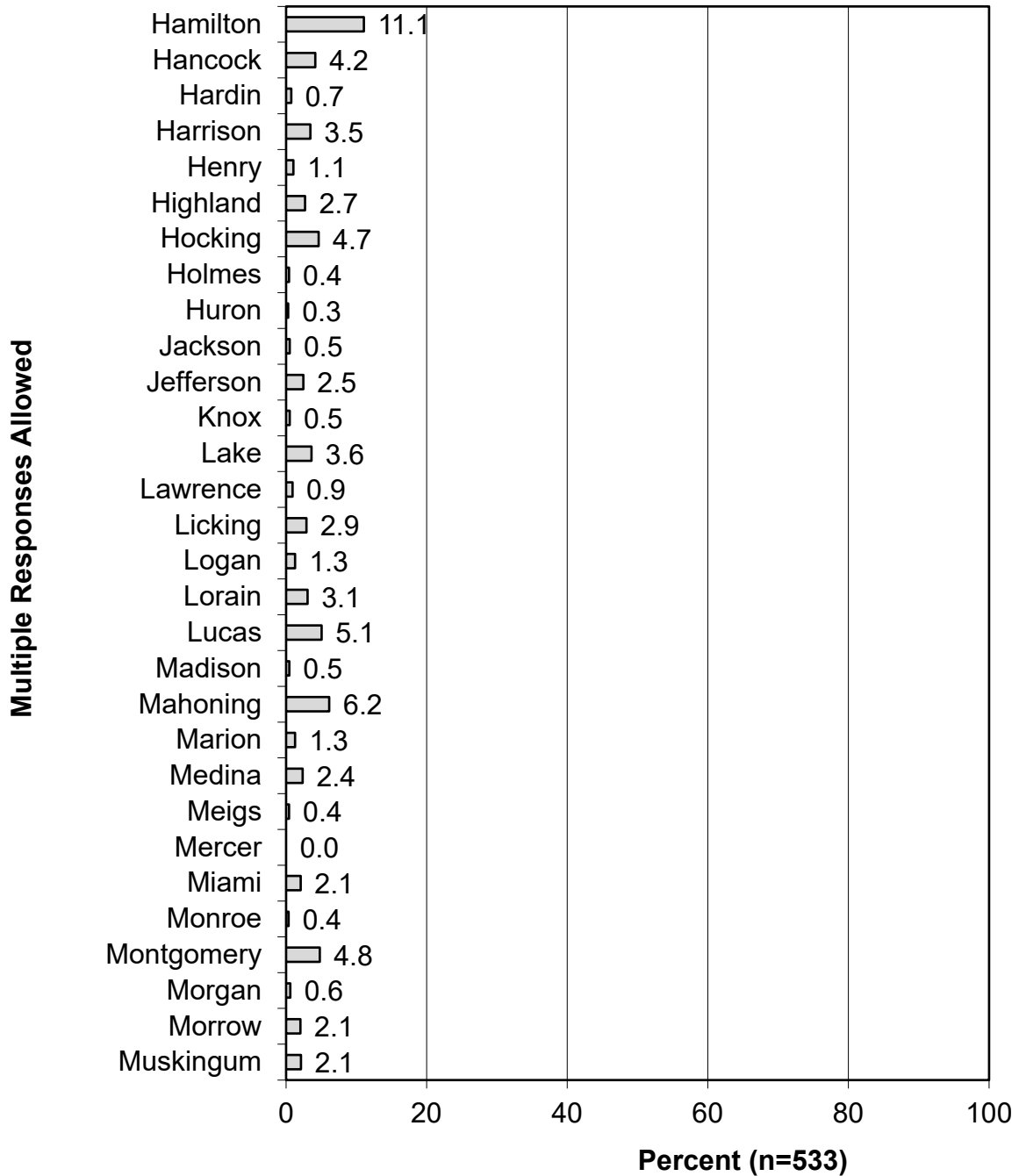
In which one Ohio county [did you plan to / did you] go target shooting most often in 2022? (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Morrow	0	3	0	0	0
Muskingum	0	0	0	7	0
Noble	0	0	0	7	0
Ottawa	0	5	0	0	0
Perry	0	0	0	11	0
Pickaway	2	0	0	0	0
Portage	0	0	4	2	0
Preble	0	0	0	0	2
Putnam	0	3	0	0	0
Richland	2	5	0	0	0
Ross	0	0	0	0	0
Sandusky	0	8	0	0	2
Scioto	0	0	0	7	2
Stark	0	0	2	0	0
Summit	0	0	7	0	0
Trumbull	0	0	14	0	0
Tuscarawas	0	0	2	0	0
Union	2	0	0	0	0
Vinton	2	0	0	5	0
Warren	0	0	0	0	7
Washington	0	0	0	4	0
Wood	0	5	0	0	0
Wyandot	0	0	0	0	0
Don't know	2	5	0	0	3



Below and in the next pages are graphs showing all counties visited (or to which a trip was planned) for sport shooting, including the most-visited as well as any other counties that were visited. The top Ohio counties for sport shooting were Hamilton, Franklin, Trumbull, Mahoning, and Cuyahoga Counties, all with at least 6% of shooters shooting or planning to shoot in them.

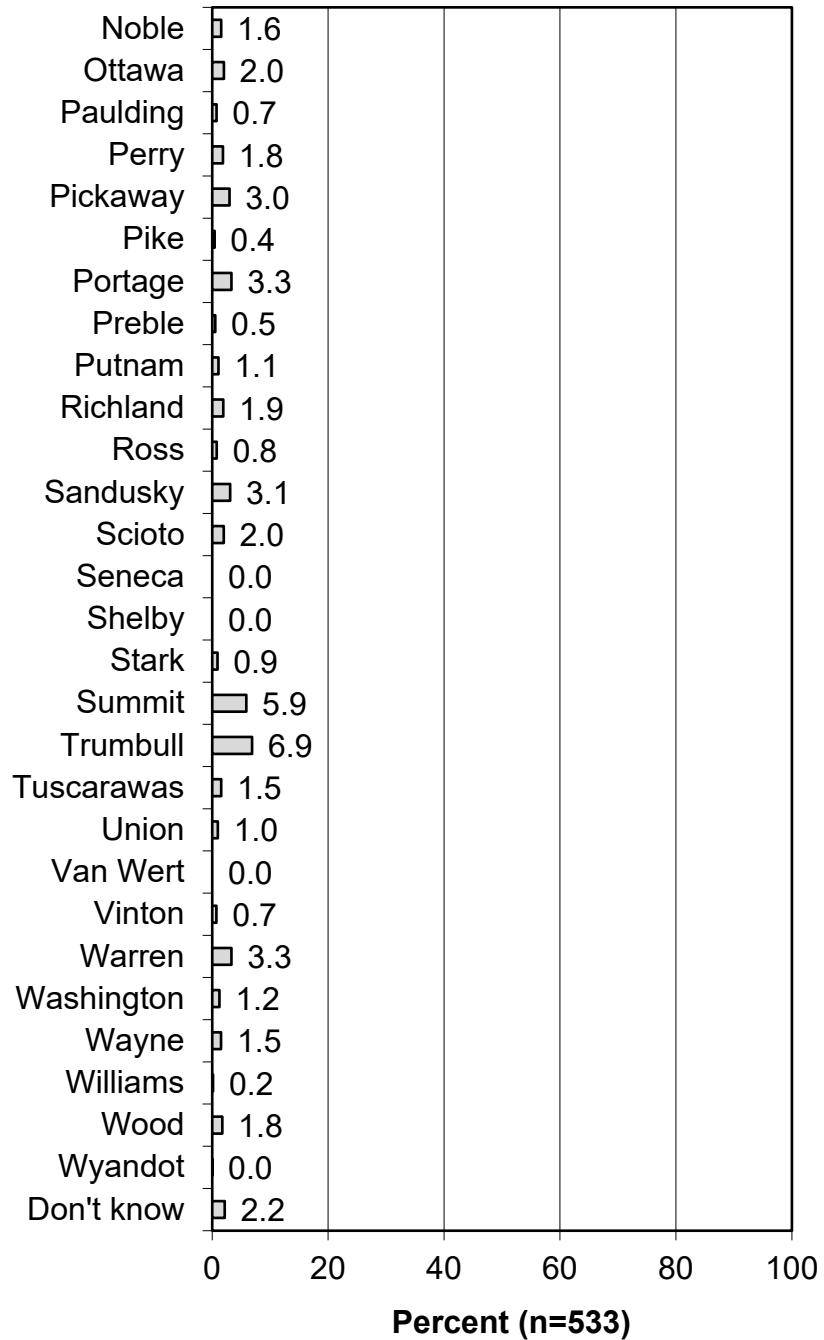


All counties visited or planned for a visit for sport shooting in Ohio in 2022. (Part 2) (Sport shooters)



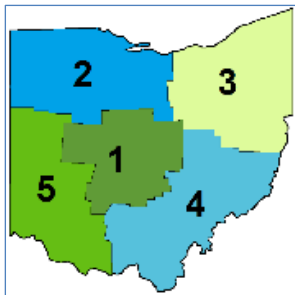
All counties visited or planned for a visit for sport shooting in Ohio in 2022. (Part 3) (Sport shooters)

Multiple Responses Allowed



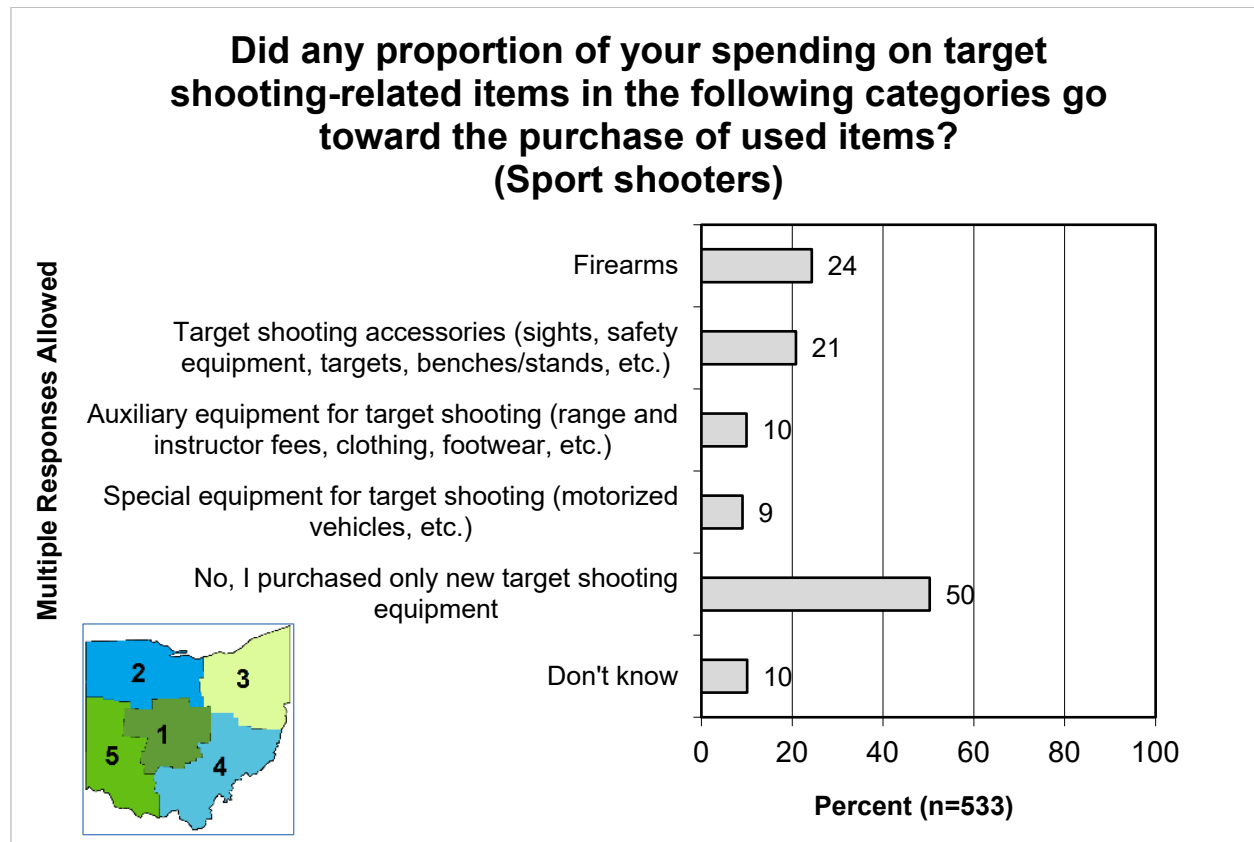
All counties visited or planned for a visit for sport shooting in Ohio in 2022. (Multiple Responses Allowed) (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	0	0	0	2	6
Allen	2	10	0	0	2
Ashland	4	3	8	0	0
Ashtabula	0	3	9	2	0
Athens	4	3	0	9	2
Auglaize	0	3	0	2	2
Belmont	4	0	0	11	2
Brown	2	0	0	0	4
Butler	4	0	2	0	11
Carroll	0	0	0	0	0
Champaign	2	3	2	0	0
Clark	2	0	0	0	6
Clermont	2	0	0	0	13
Clinton	2	0	0	0	4
Columbiana	0	0	8	2	0
Coshocton	0	0	2	7	0
Crawford	0	3	0	0	0
Cuyahoga	2	0	15	0	0
Darke	0	0	0	0	6
Defiance	0	0	0	0	0
Delaware	20	1	0	0	0
Erie	0	10	6	2	0
Fairfield	13	0	0	4	6
Fayette	0	0	0	0	0
Franklin	29	0	2	0	4
Fulton	0	3	2	0	0
Gallia	4	0	0	4	0
Geauga	0	0	0	0	0
Greene	0	0	0	0	11
Guernsey	2	0	4	11	2
Hamilton	9	0	4	0	31
Hancock	7	8	2	2	4
Hardin	2	3	0	0	0
Harrison	7	0	4	2	2
Henry	2	5	0	0	0
Highland	0	0	4	2	4
Hocking	9	5	4	11	0
Holmes	2	0	0	0	0
Huron	0	3	0	0	0
Jackson	0	0	0	0	2
Jefferson	2	0	4	0	2
Knox	0	0	0	0	2
Lake	2	3	7	0	2
Lawrence	0	3	0	9	0
Licking	13	0	0	4	0
Logan	7	0	0	0	0
Lorain	2	3	6	0	0
Lucas	0	40	0	0	0
Madison	2	0	0	0	0
Mahoning	0	0	17	0	0
Marion	7	0	0	0	0
Medina	0	0	7	0	0

All counties visited or planned for a visit for sport shooting in Ohio in 2022. (Multiple Responses Allowed) (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Meigs	2	0	0	0	0
Mercer	0	0	0	0	0
Miami	0	0	0	0	8
Monroe	0	0	0	5	0
Montgomery	0	0	0	0	19
Morgan	0	0	0	1	2
Morrow	5	5	0	0	2
Muskingum	5	0	2	7	0
Noble	2	0	0	9	2
Ottawa	2	13	0	0	0
Paulding	2	3	0	0	0
Perry	2	0	0	20	0
Pickaway	9	0	2	0	2
Pike	2	0	0	0	0
Portage	0	0	9	2	0
Preble	0	0	0	0	2
Putnam	0	3	2	0	0
Richland	2	8	0	0	2
Ross	0	0	2	0	0
Sandusky	4	8	2	0	2
Scioto	4	0	0	9	2
Seneca	0	0	0	0	0
Shelby	0	0	0	0	0
Stark	0	0	2	0	0
Summit	2	0	15	0	0
Trumbull	0	0	19	2	0
Tuscarawas	0	0	4	0	0
Union	2	0	0	0	2
Van Wert	0	0	0	0	0
Vinton	2	0	0	5	0
Warren	0	3	2	0	9
Washington	0	0	2	7	0
Wayne	0	0	4	0	0
Williams	0	0	0	2	0
Wood	0	13	0	2	0
Wyandot	0	0	0	0	0
Don't know	3	3	0	3	4



SPORT SHOOTING EXPENDITURES (USED)

Overall, 40% of shooters spent part of their target shooting-related purchases on used items, most commonly on firearms and target shooting accessories.

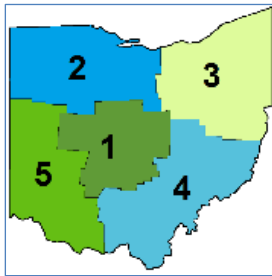


Did any proportion of your spending on target shooting-related items in the following categories go toward the purchase of used items? (Multiple Response Allowed) (Sport shooters)

Percentages	District 1	District 2	District 3	District 4	District 5
Firearms	29	18	26	13	25
Target shooting accessories (sights, safety equipment, targets, benches/stands, etc.)	27	15	21	13	21
Auxiliary equipment for target shooting (range and instructor fees, clothing, footwear, etc.)	9	13	10	11	8
Special equipment for target shooting (motorized vehicles, boats, trailers, etc.)	11	5	15	7	2
No, I purchased only new target shooting equipment	49	52	51	60	47
Don't know	5	15	9	13	13

The following table shows the mean percentages of total spending that went toward used items. This was a follow-up question to those who bought used items in each category, although the results below are shown out of all respondents; 11% of shooters bought used firearms in 2022.

What proportion of your annual target shooting-related spending on [listed category] went toward the purchase of used items? (Asked of those who said that they spent in this category on used items; shown out of all respondents.) (Sport Shooters)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Firearms	11	17	6	12	3	9
Ammunition	7	9	7	7	4	6
Target shooting accessories	7	7	5	7	6	7
Auxiliary equipment	4	4	6	4	3	4
Special equipment	4	4	3	7	3	1



SPORT SHOOTING EXPENDITURES (ONLINE)

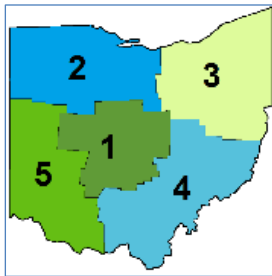
Over a third of shooters (38%) purchased shooting-related equipment online.



Were any of your target shooting-related purchases in the following categories made through an online-only retailer or an internet marketplace, such as Amazon, eBay, or another online retailer? (Multiple Response Allowed) (Sport shooters)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Ammunition	20	23	31	11	9
Target shooting accessories (sights, safety equipment, targets, benches/stands, etc.)	36	10	24	12	9
Firearms	25	10	21	7	17
Auxiliary equipment for target shooting (range and instructor fees, clothing, footwear, etc.)	9	23	9	11	11
Special equipment for target shooting (motorized vehicles, boats, trailers, etc.)	18	3	8	4	4
No, I didn't purchase any target shooting items through an online-only retailer	42	64	50	72	64
Don't know	5	0	9	7	8

The table below shows the mean percentages of total spending that was done online. As with the previous section on used equipment purchases, this was a follow-up question to those who purchased items online, although the results below are shown out of all respondents.

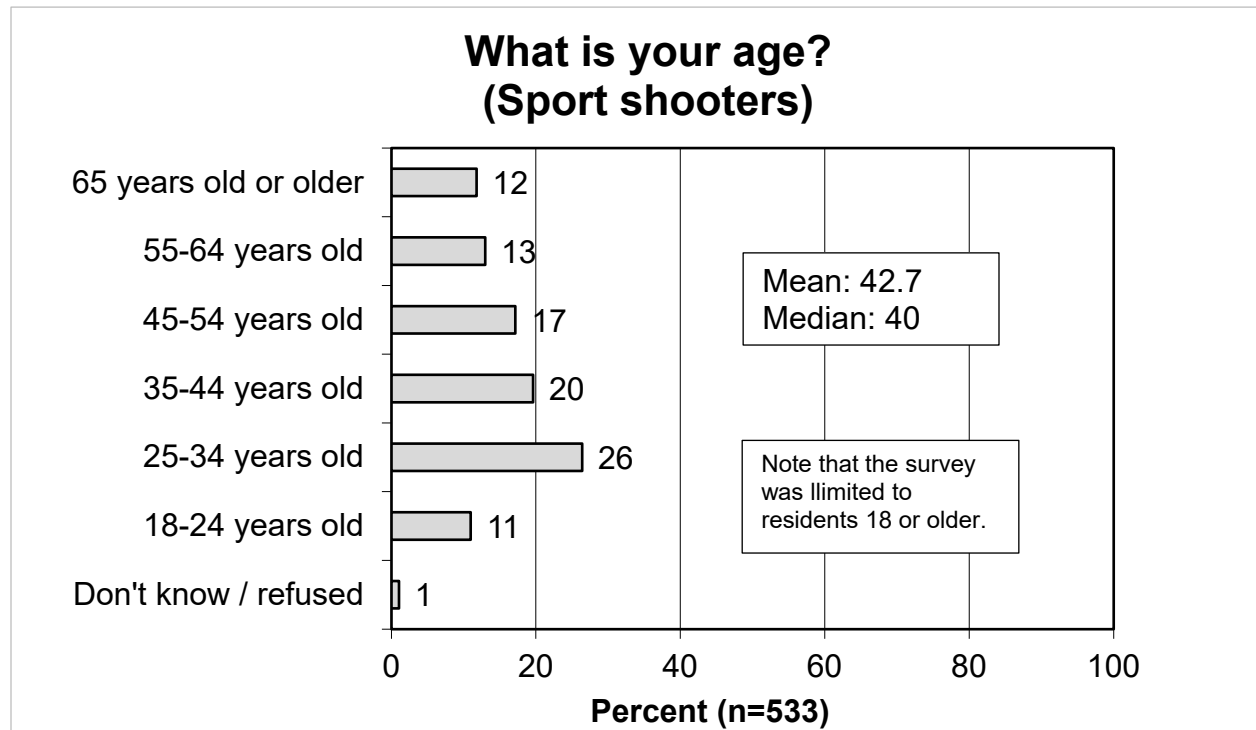
What proportion of your annual target shooting-related spending on [listed category] went toward the purchase of items through an online-only retailer or an or an internet marketplace? (Asked of those who said that they spent in this category online; shown out of all respondents.) (Sport Shooters)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Firearms	8	14	4	10	3	6
Ammunition	10	10	9	14	6	4
Target shooting accessories	8	14	5	9	4	3
Auxiliary equipment	4	2	9	2	6	4
Special equipment	4	6	2	5	3	2



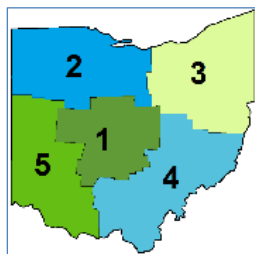
DEMOGRAPHIC CHARACTERISTICS

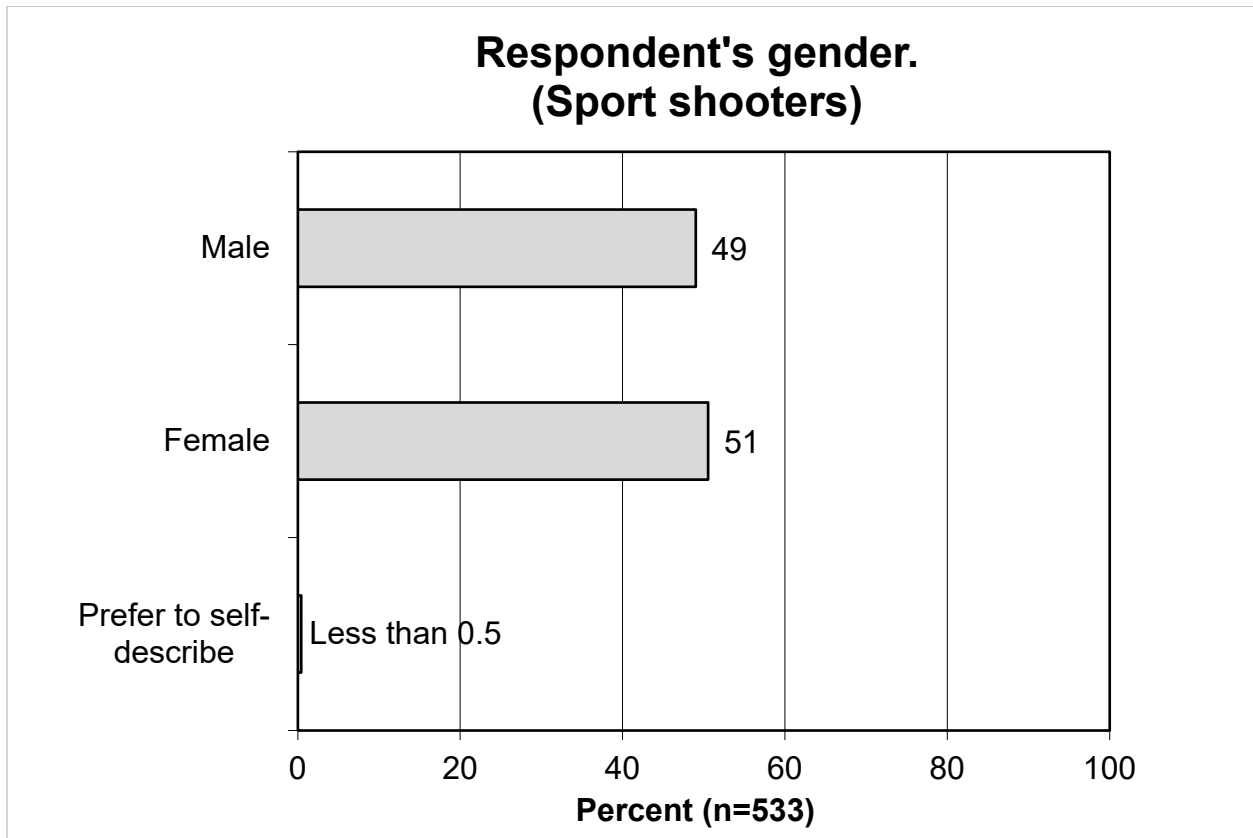
The survey gathered the following information:

- Age.
- Gender.
- Ethnicity.
- Residential area: urban to rural continuum.
- County of residence.

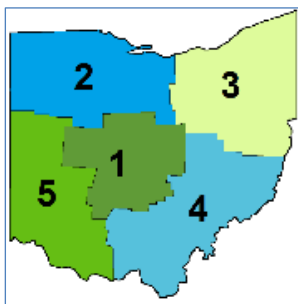


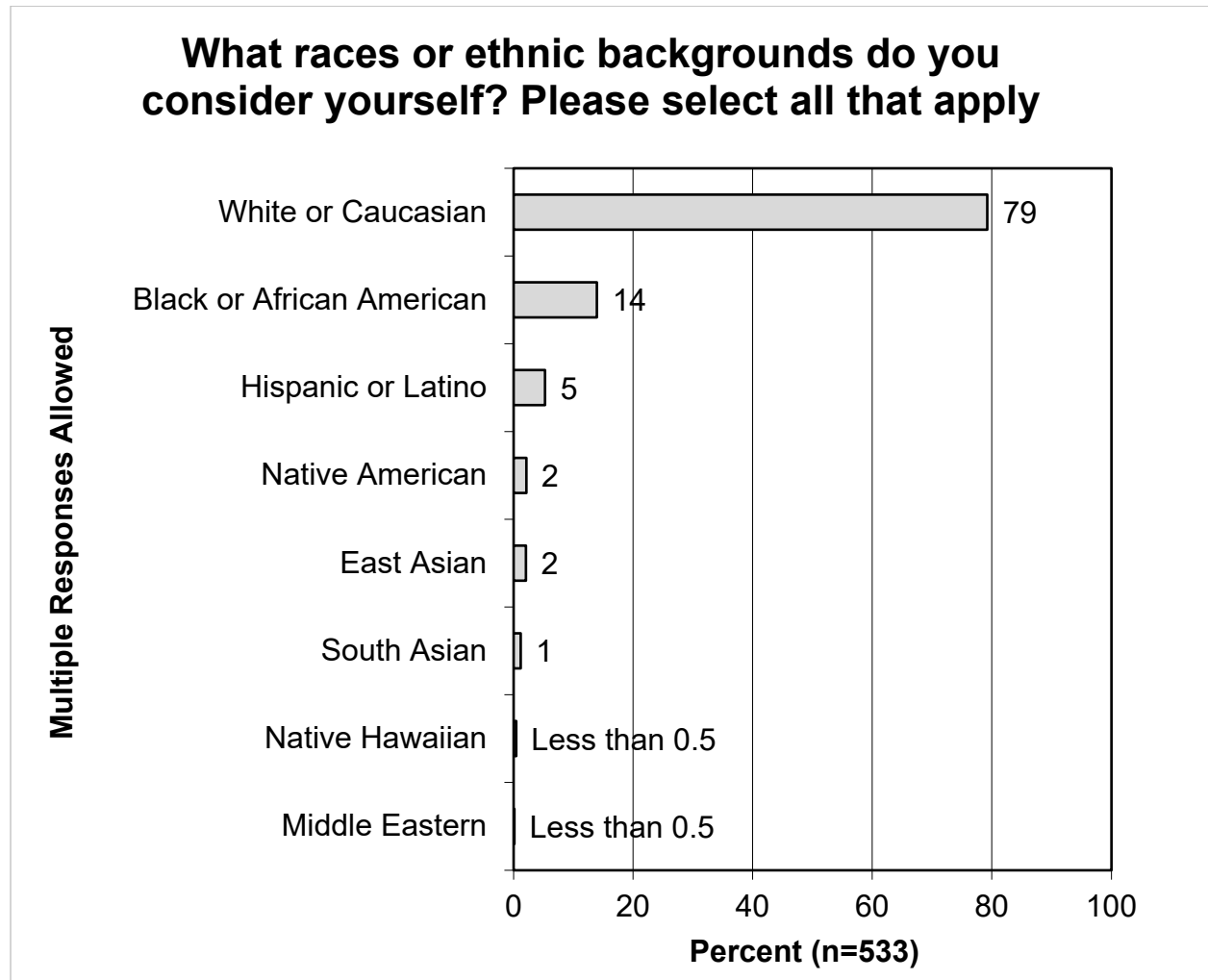
What is your age? (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
65 years old or older	7	10	19	0	9
55-64 years old	11	10	15	18	11
45-54 years old	7	23	11	29	27
35-44 years old	42	21	13	21	11
25-34 years old	27	23	28	25	26
18-24 years old	5	13	11	5	17
Don't know	0	0	2	2	0
Mean age (years)	40.8	43.2	45.1	42.6	40.8
Median age (years)	37	43	41	43	41



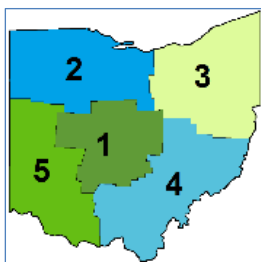


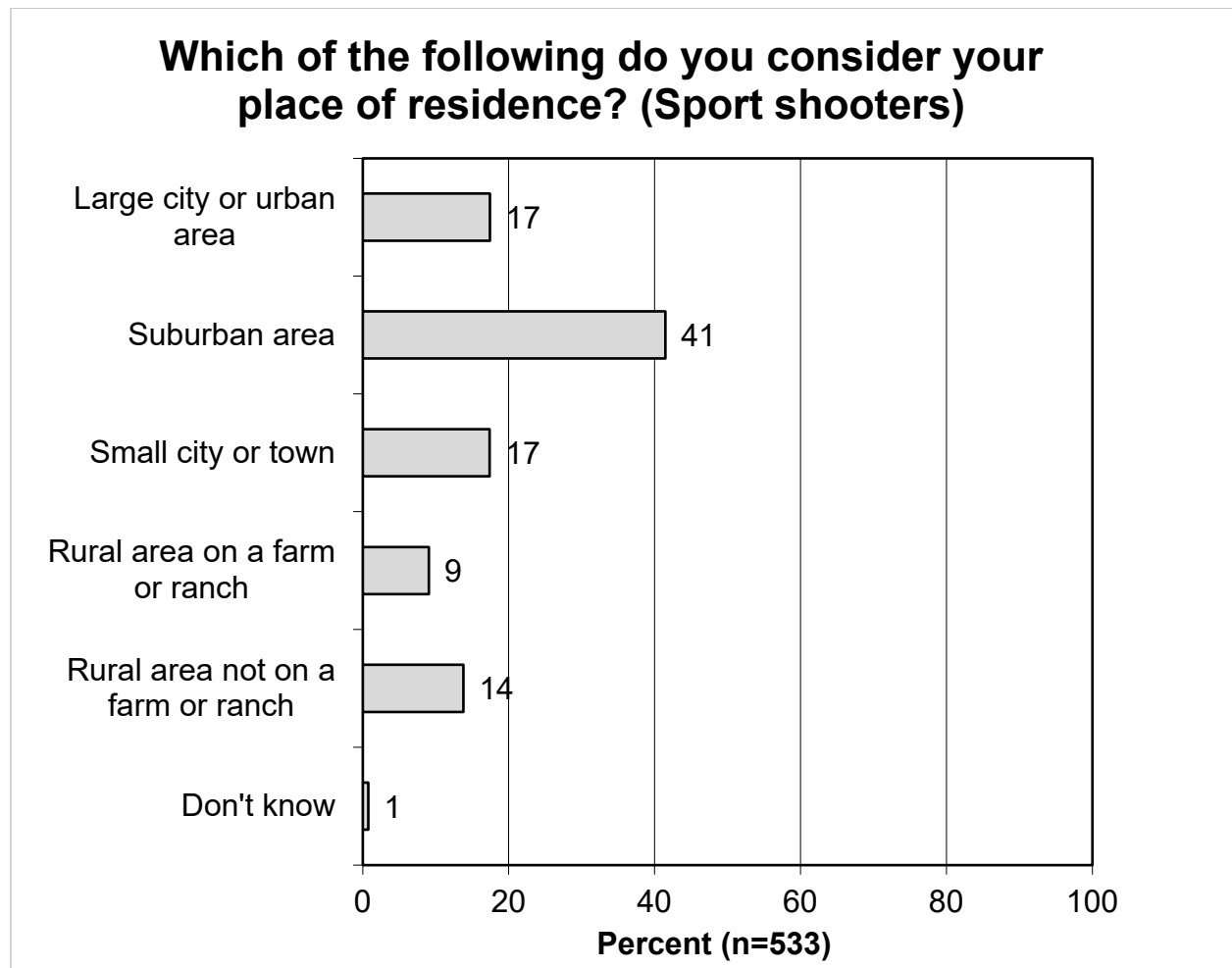
Respondent's gender. (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Male	47	50	56	38	44
Female	51	51	44	62	56
Prefer to self-describe	2	0	0	0	0



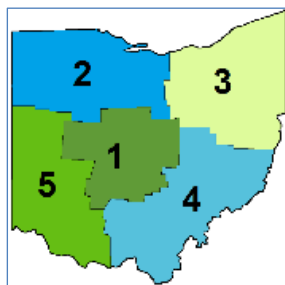


What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Multiple Responses Allowed) (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
White or Caucasian	75	77	81	93	77
Black or African American	18	15	11	2	19
Hispanic or Latino	4	5	8	2	2
Native American	2	5	0	0	4
East Asian	4	0	0	2	4
South Asian	2	0	2	0	0
Native Hawaiian	2	0	0	0	0
Middle Eastern	0	0	0	2	0

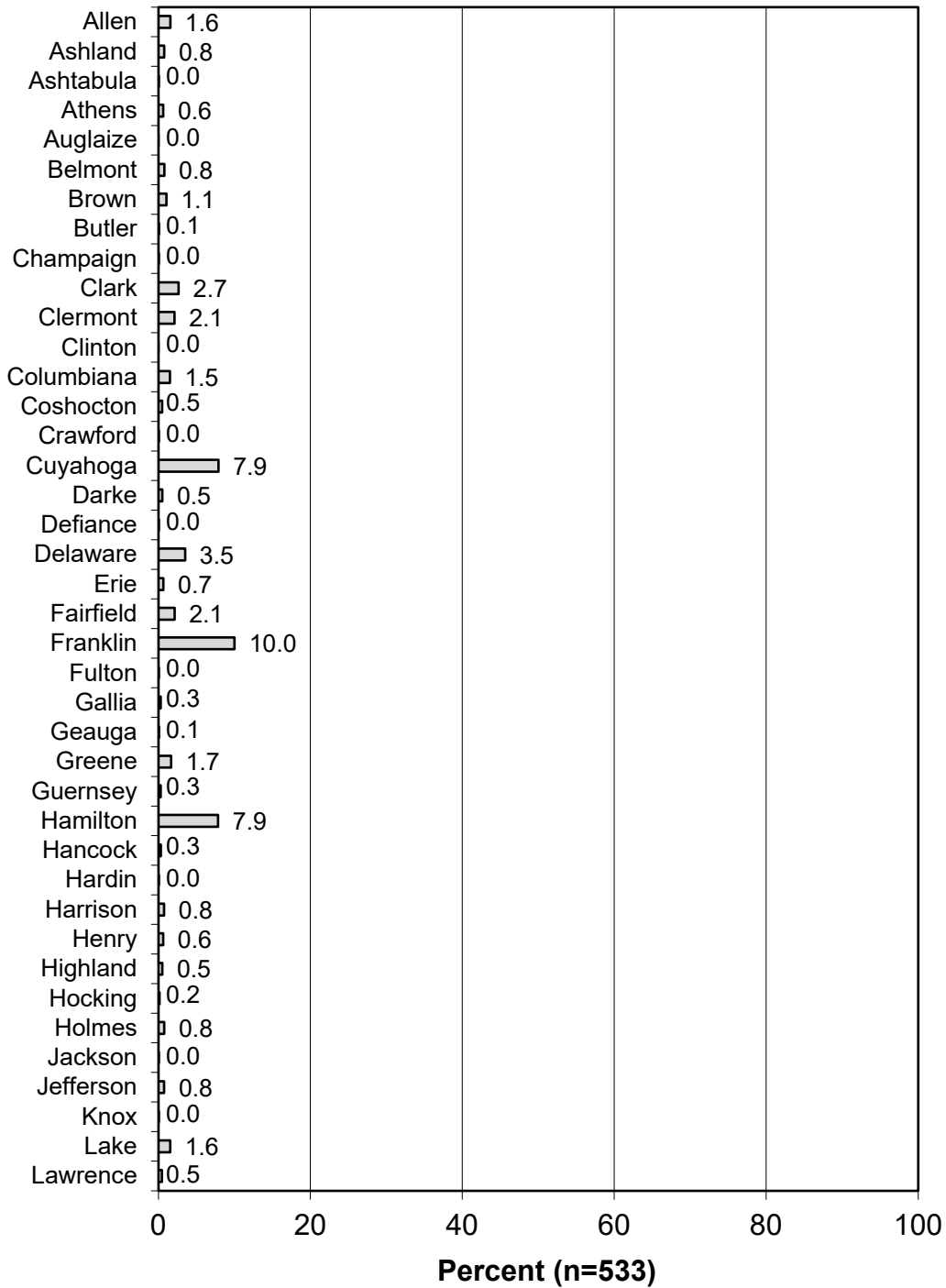




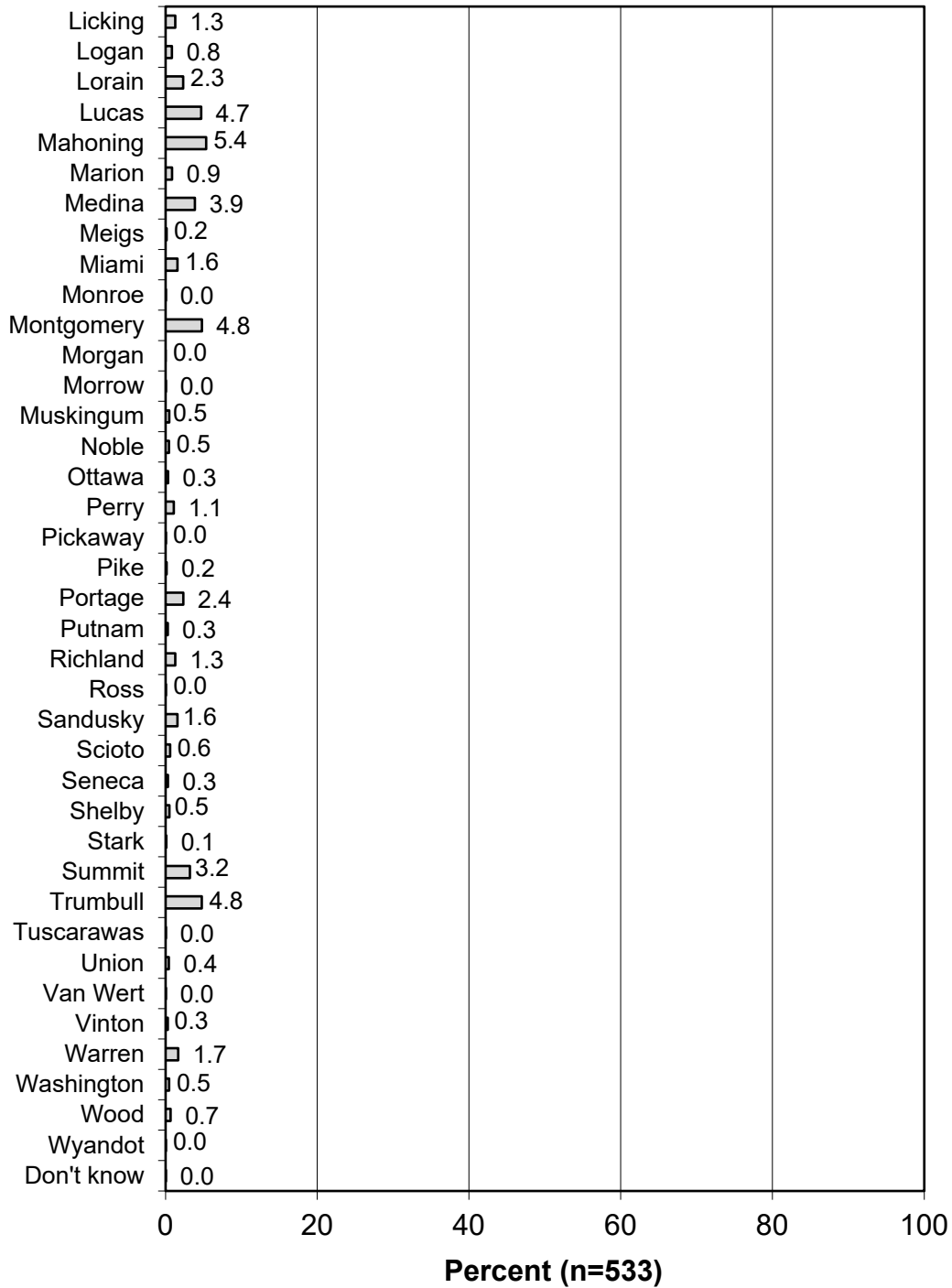
Which of the following do you consider your place of residence? (Sport shooters)					
Percentages	District 1	District 2	District 3	District 4	District 5
Large city or urban area	32	25	13	4	13
Suburban area	34	25	52	2	51
Small city or town	18	31	13	28	13
Rural area on a farm or ranch	7	8	5	29	13
Rural area not on a farm or ranch	9	11	15	36	11
Don't know	0	0	2	0	0



What county do you live in? (Part 1) (Sport shooters)



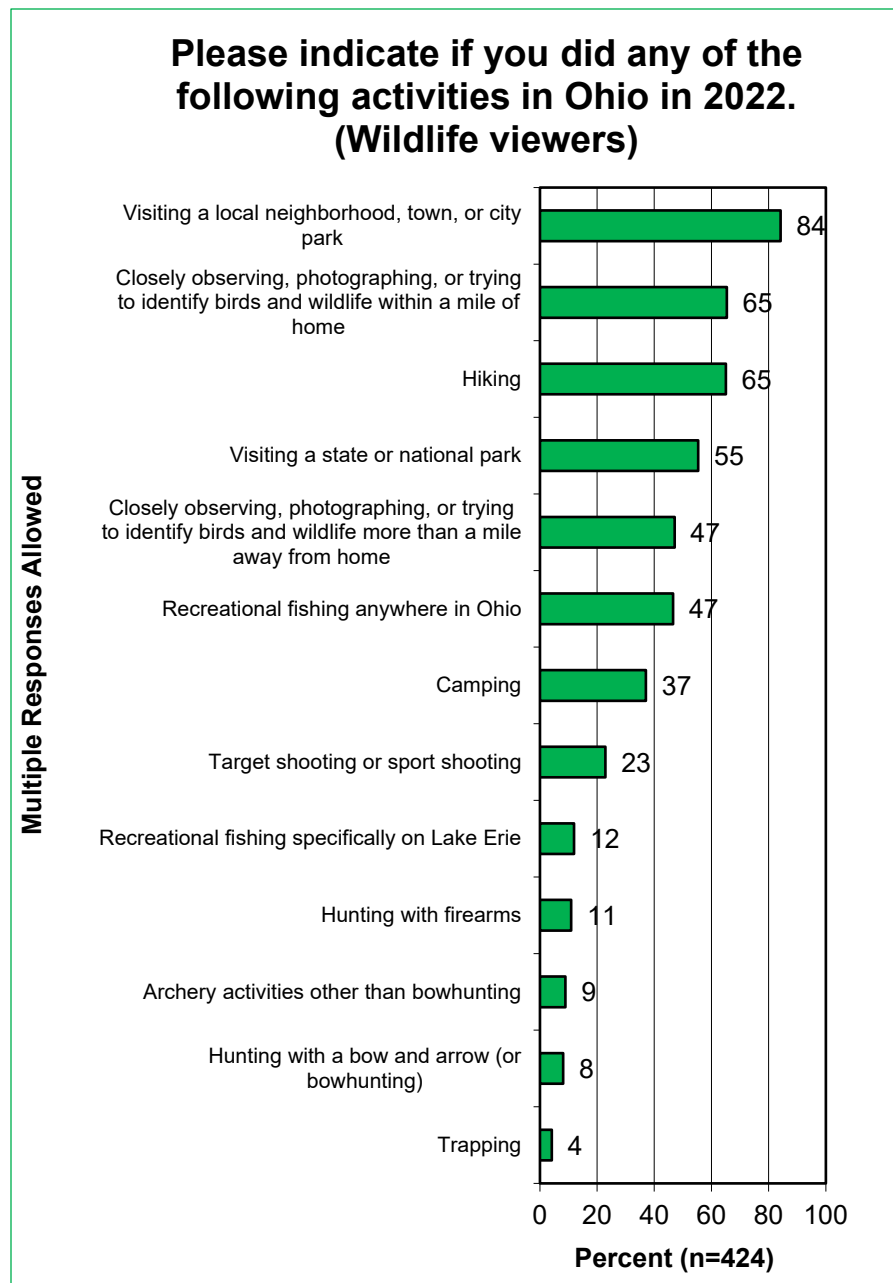
What county do you live in? (Part 2) (Sport shooters)



PARTICIPATION AND EXPENDITURE SURVEY OF WILDLIFE VIEWERS

For this part of the project, the research team surveyed wildlife viewers—those who had viewed wildlife at home or on a trip within the state of Ohio during 2022 or had spent money on wildlife viewing equipment. This section starts with a look at outdoor recreation participation in general by wildlife viewers before more closely examining their participation in wildlife viewing itself, including a look at equipment used and locations of wildlife viewing. Several aspects of expenditures on wildlife viewing are examined as well. Finally, the section ends with demographic analyses of wildlife viewers.

PARTICIPATION IN OUTDOOR RECREATION

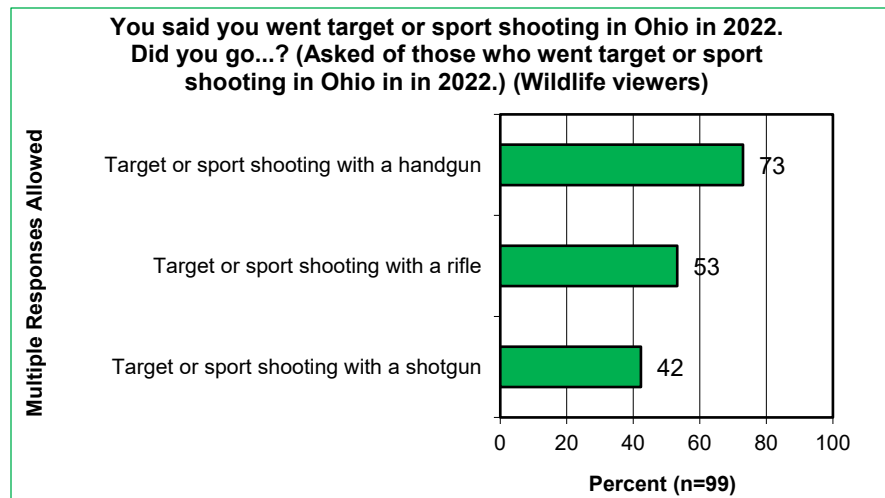


A huge majority of wildlife viewers had visited a local park. A second tier of activities, with a majority participating in each, consists of wildlife viewing at home, hiking, and visiting a state or national park.

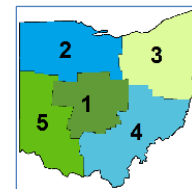
Note that a requirement of being surveyed in the wildlife viewing survey is participation in one of these viewing activities shown here or spending money on wildlife viewing equipment.

Of interest in particular is that 65% of wildlife viewers did so at or around their home, and 47% did so away from home. District results are shown on the next page.

Please indicate if you did any of the following activities in Ohio in 2022: (Multiple Responses Allowed) (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Visiting a local neighborhood, town, or city park	82	89	87	79	82
Hiking	61	51	71	54	71
Closely observing, photographing, or trying to identify birds and wildlife within a mile of home	60	64	65	73	69
Visiting a state or national park	60	53	53	64	53
Closely observing, photographing, or trying to identify birds and wildlife more than a mile away from home	55	42	43	36	54
Recreational fishing anywhere in Ohio	38	47	45	56	53
Camping	37	39	30	44	44
Target shooting or sport shooting	24	19	23	33	20
Recreational fishing specifically on Lake Erie:					
Hunting with firearms	5	21	17	7	8
Hunting with firearms	11	9	14	20	5
Archery activities other than bowhunting	11	8	9	4	10
Hunting with a bow and arrow (or bowhunting)	11	2	7	10	9
Trapping	4	3	5	4	3



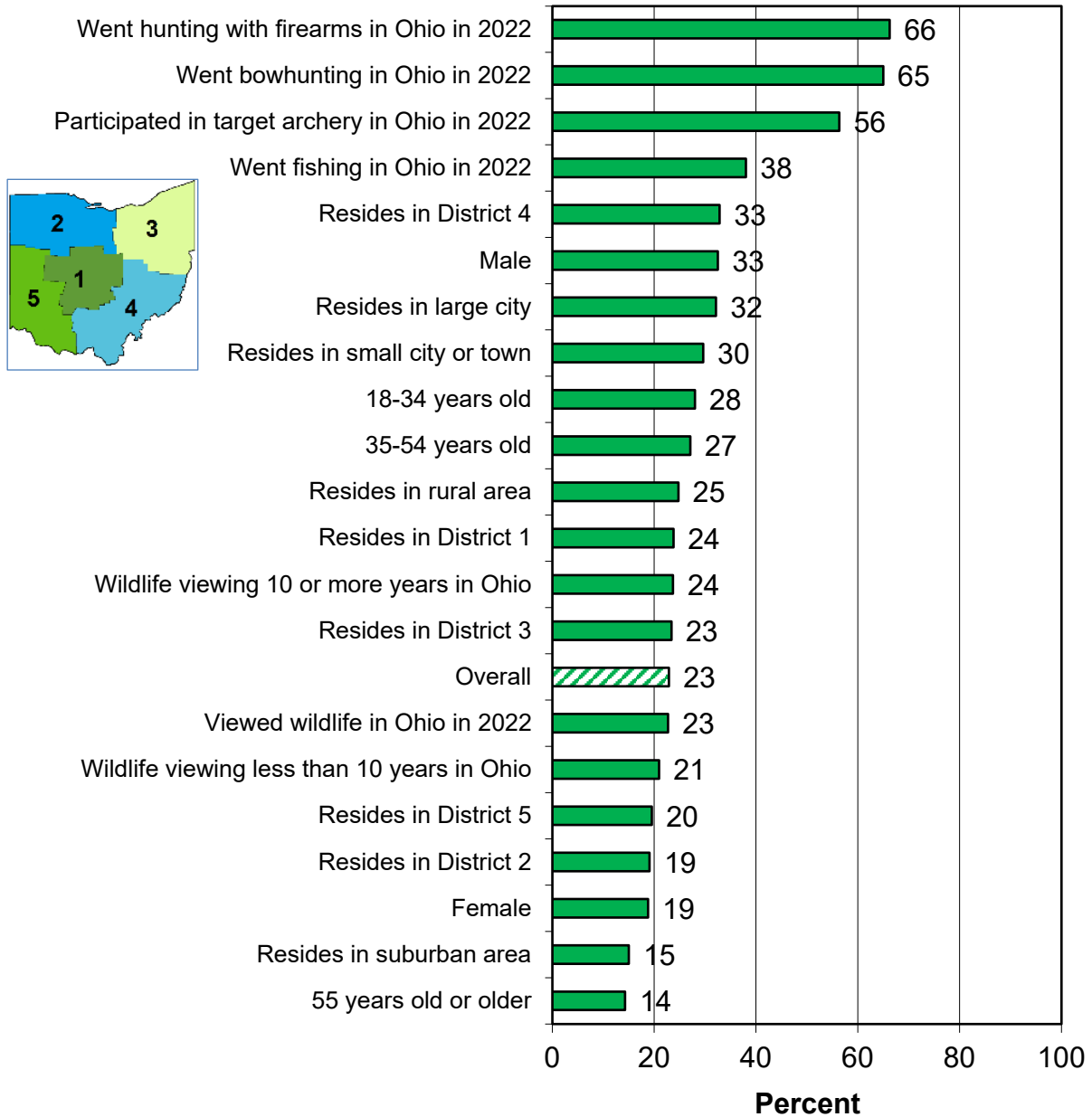
A follow-up question of those who went sport shooting asked them about types of firearms used. Most commonly, wildlife viewers who also shot used handguns. District results are tabulated below.



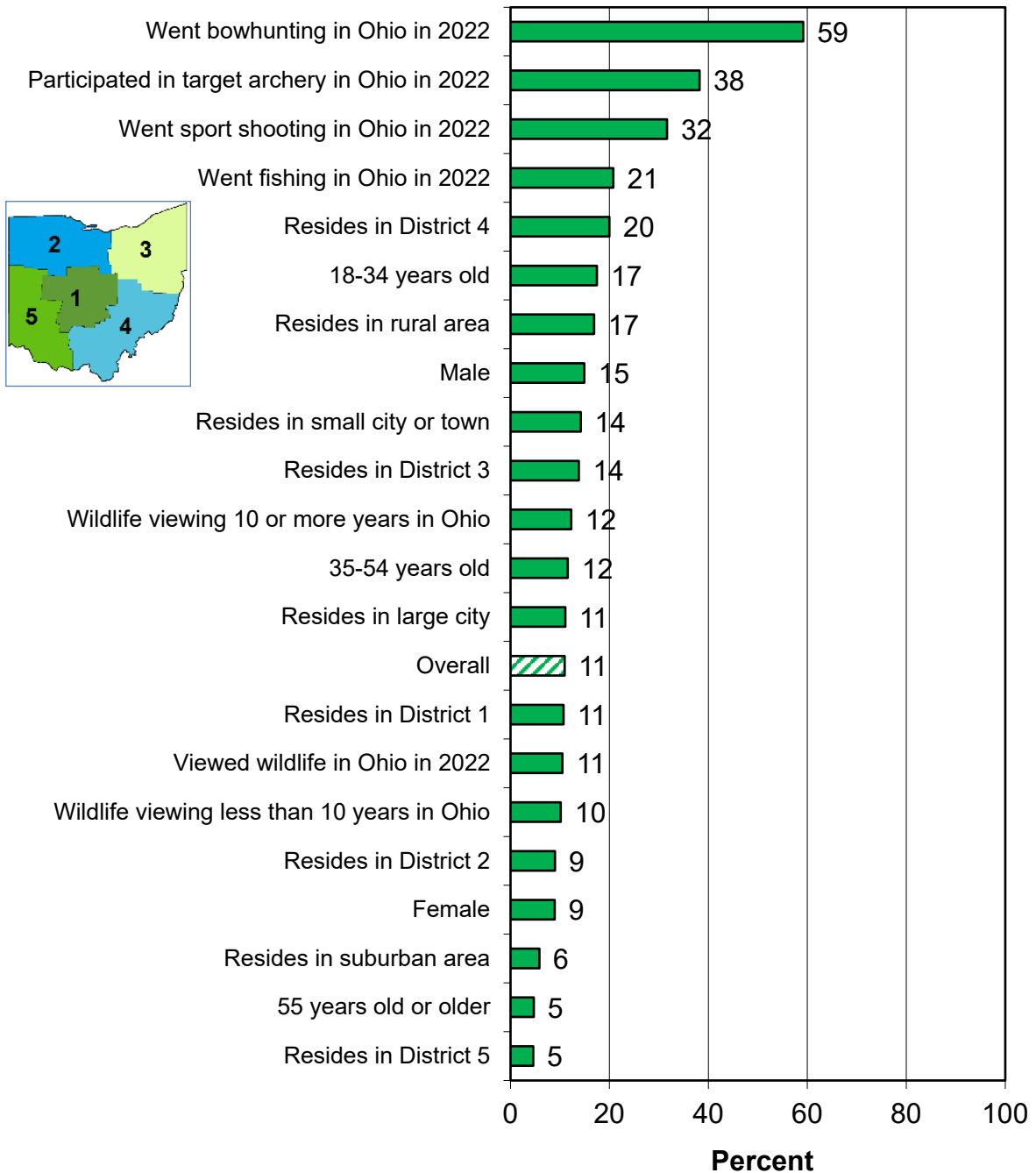
You said you went target or sport shooting in Ohio in 2022. Did you go...? (Asked of those who went sport shooting in Ohio in in 2022.) (Multiple Responses Allowed) (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Target or sport shooting with a handgun	70	71	68	87	76
Target or sport shooting with a rifle	35	29	68	43	65
Target or sport shooting with a shotgun	45	47	41	30	47

Demographic analyses graphs are included on this page and subsequent pages showing those wildlife viewer groups most likely to also sport shoot, go hunting with firearms, go bowhunting, go fishing, and participate in target archery.

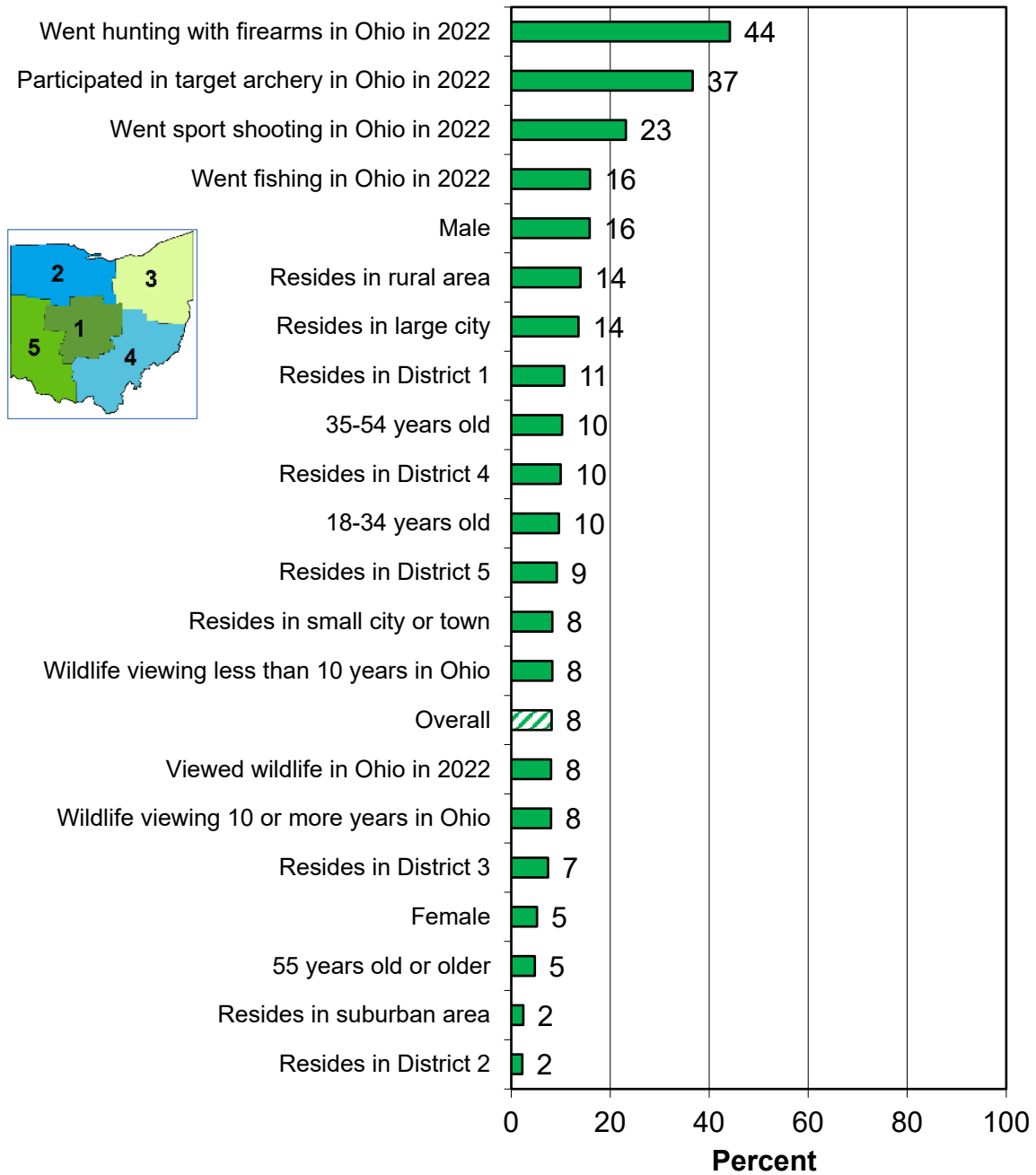
Percent of each of the following groups who went target or sport shooting in Ohio in 2022: (Wildlife viewers)



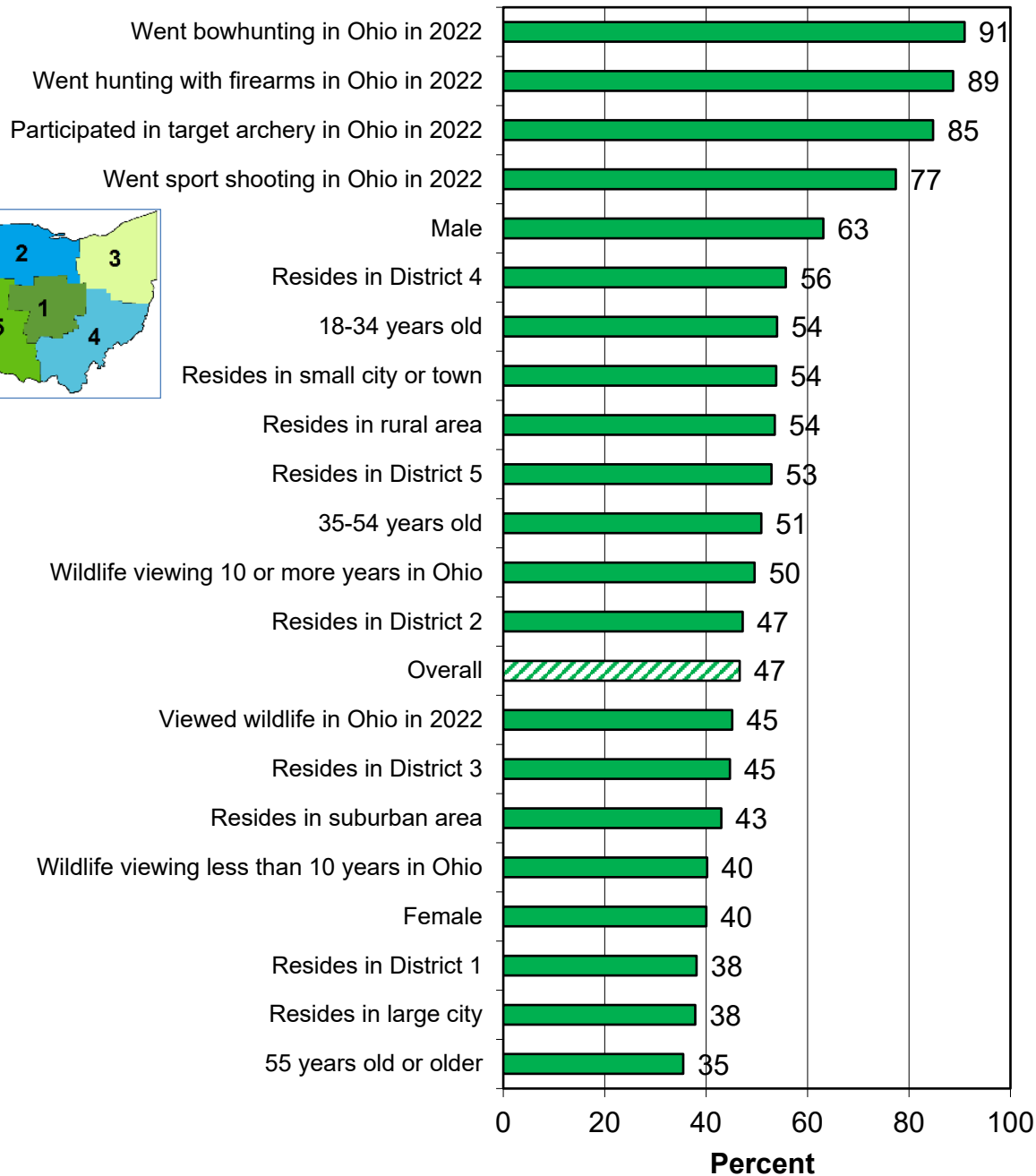
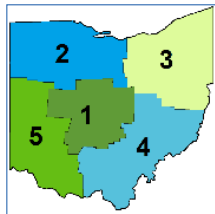
Percent of each of the following groups who went hunting with firearms in Ohio in 2022: (Wildlife viewers)



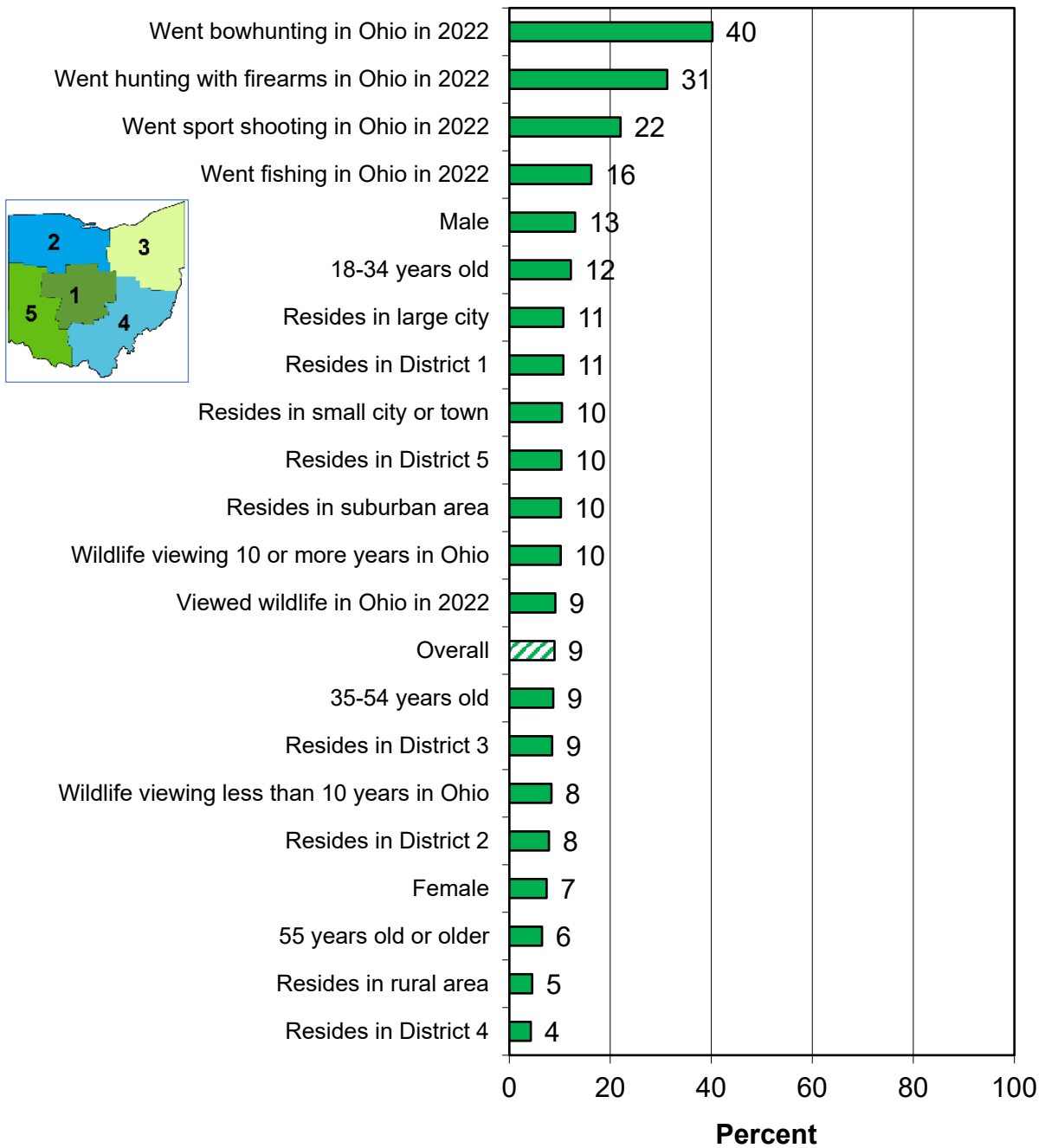
Percent of each of the following groups who went bowhunting in Ohio in 2022: (Wildlife viewers)



Percent of each of the following groups who went fishing in Ohio in 2022: (Wildlife viewers)



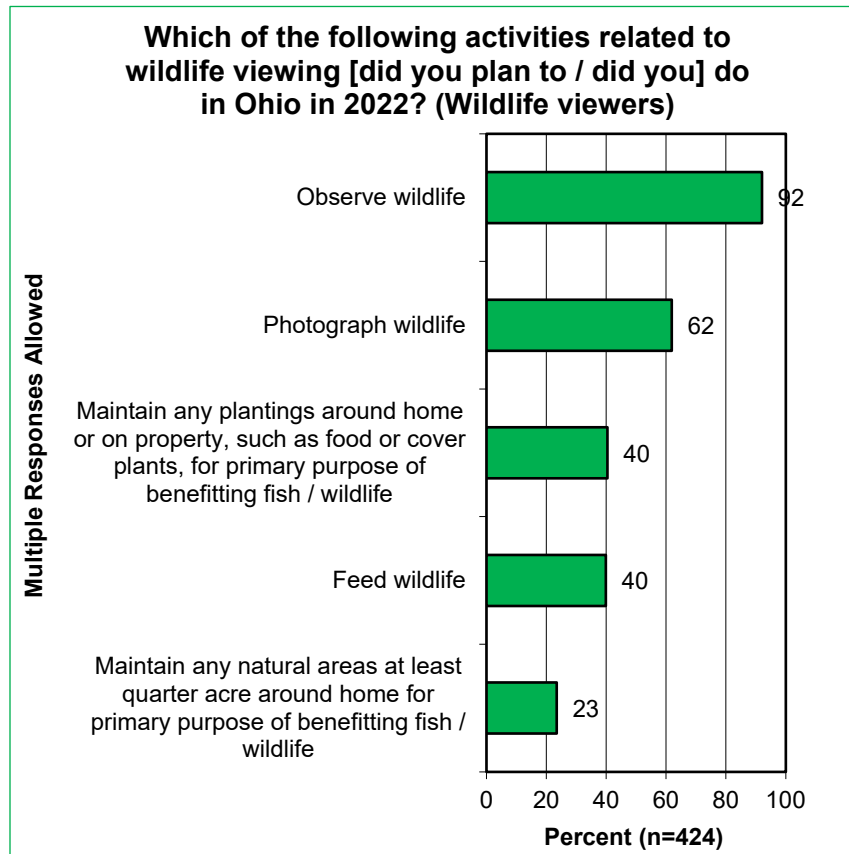
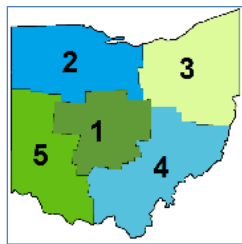
Percent of each of the following groups who participated in target archery in Ohio in 2022: (Wildlife viewers)



WILDLIFE VIEWING PARTICIPATION

The survey asked wildlife viewers about five specific viewing activities that they had done or planned to do. Nearly all consider themselves to have observed wildlife (or had planned to), and just under two thirds had photographed (or had planned to photograph) wildlife.

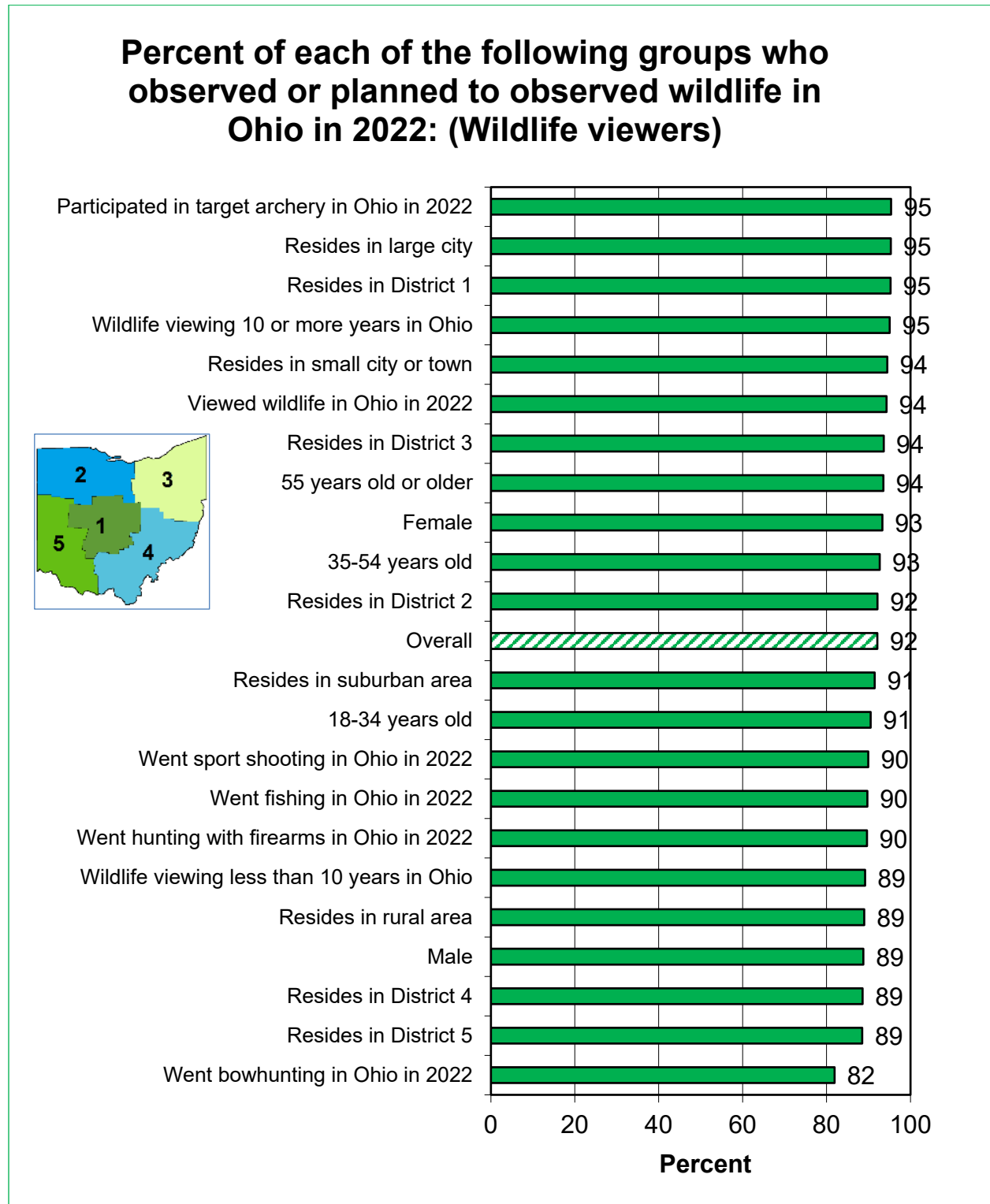
In the middle in participation are maintaining plantings for wildlife and feeding wildlife. At the bottom is maintaining natural areas.



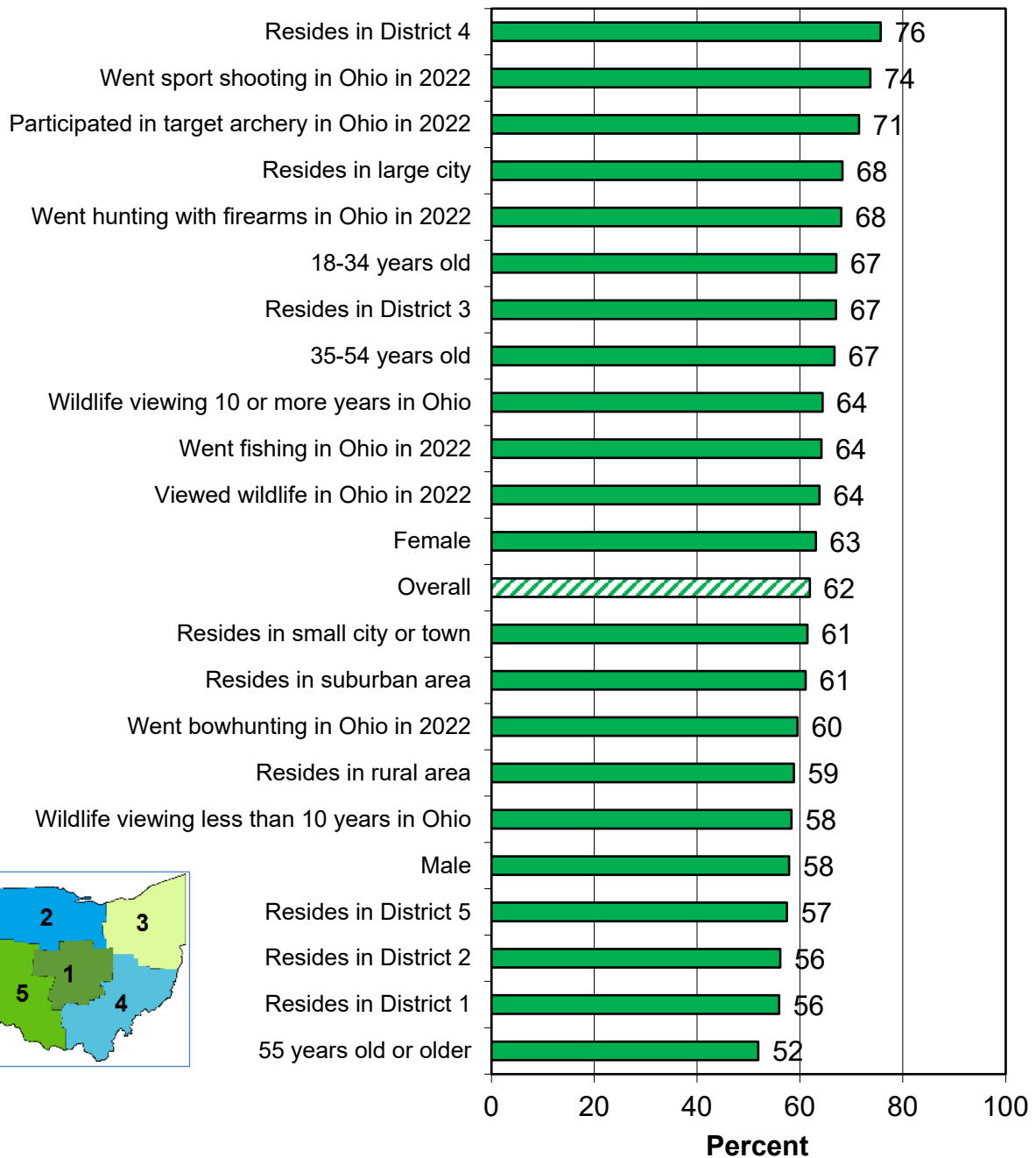
The District results are tabulated below.

Which of the following activities related to wildlife viewing [did you plan to / did you] do in Ohio in 2022? (Multiple Responses Allowed) (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Observe wildlife	95	92	94	89	89
Photograph wildlife	56	56	67	76	57
Maintain any plantings around your home or on your property, such as food or cover plants, for the primary purpose of benefitting fish or wildlife	44	35	39	31	45
Feed wildlife	45	44	38	40	36
Maintain any natural areas of at least a quarter acre around your home for the primary purpose of benefitting fish or wildlife (Do not include areas that are farmed.)	18	19	28	19	26
Other	0	0	1	0	0
Don't know	0	2	1	1	2

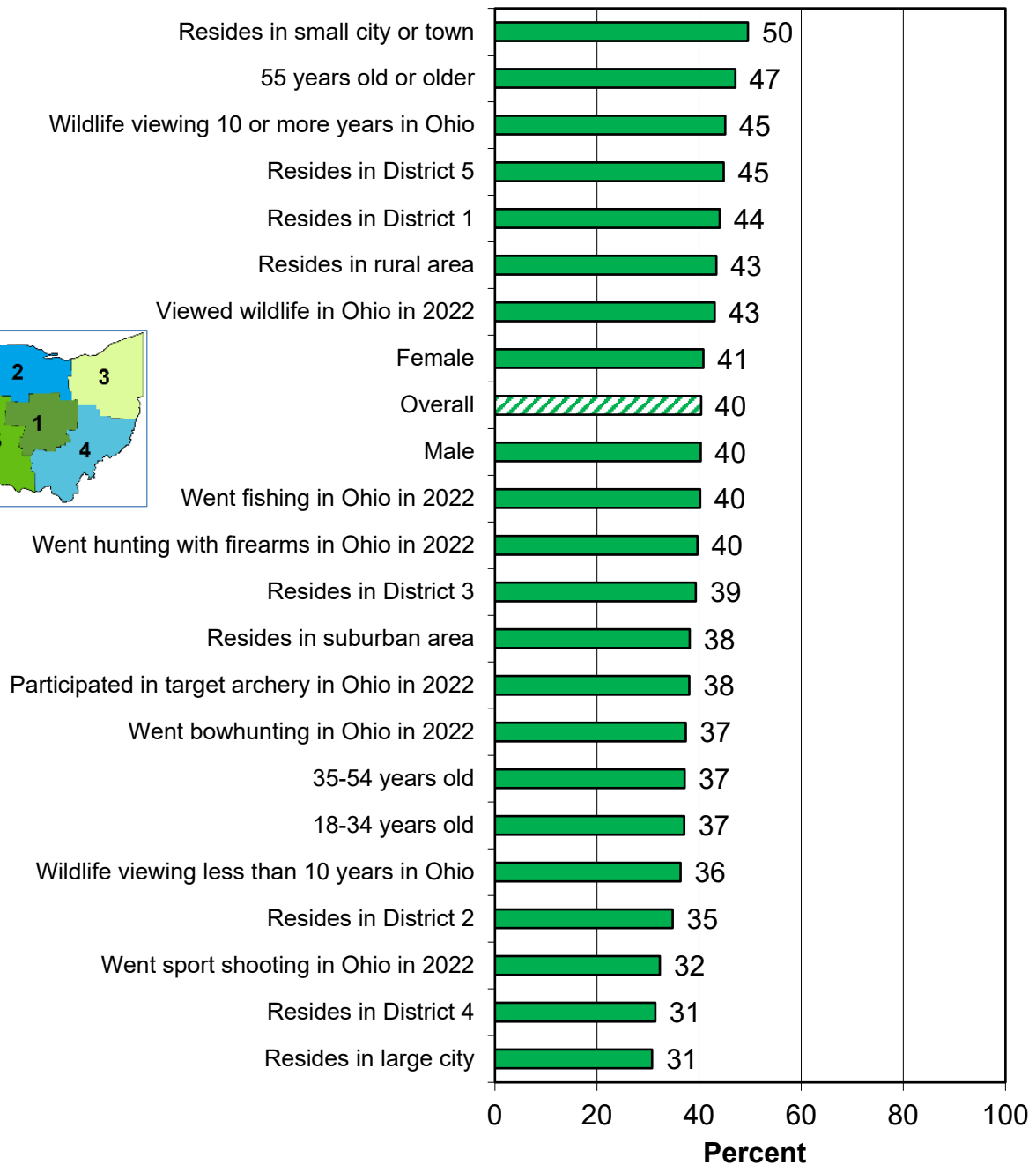
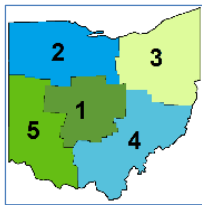
The demographic analyses graphs that follow show the wildlife viewer groups most likely to do the various wildlife viewing activities.



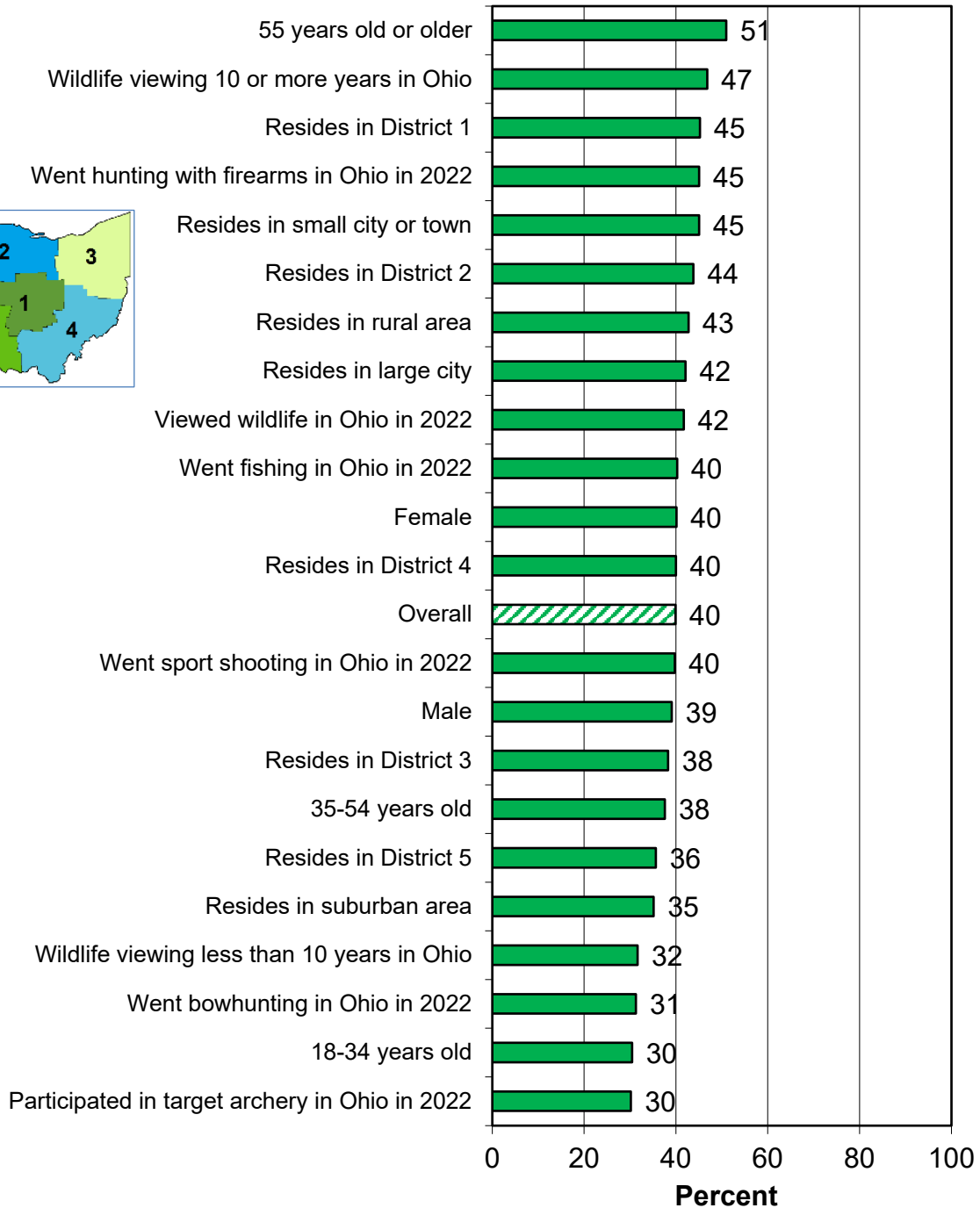
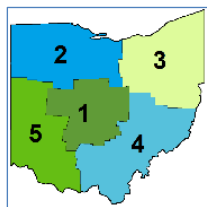
Percent of each of the following groups who photographed or planned to photograph wildlife in Ohio in 2022: (Wildlife viewers)



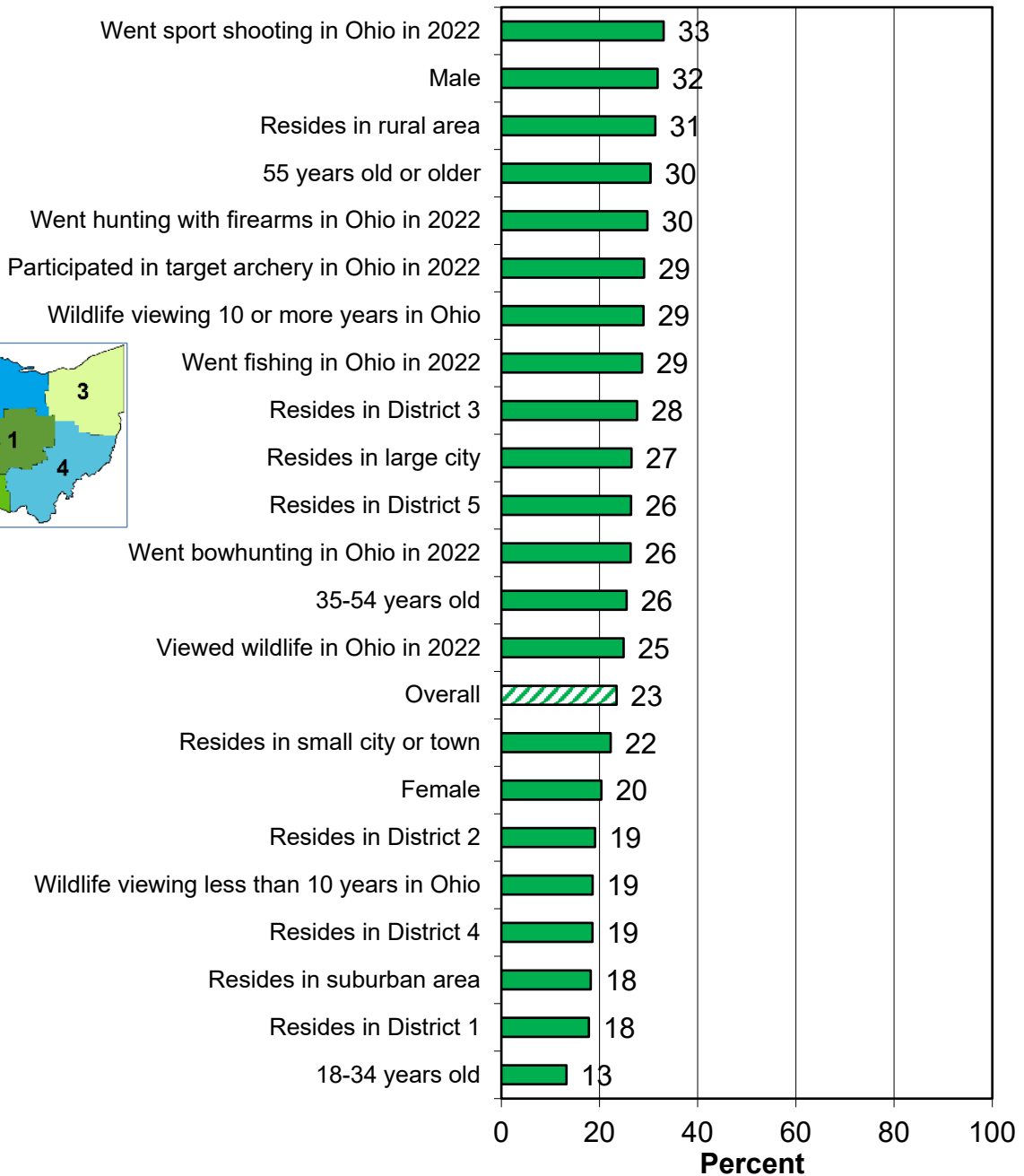
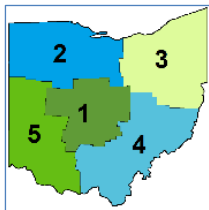
Percent of each of the following groups who maintained or planned to maintain plantings around their home or property to benefit fish or wildlife in Ohio in 2022: (Wildlife viewers)

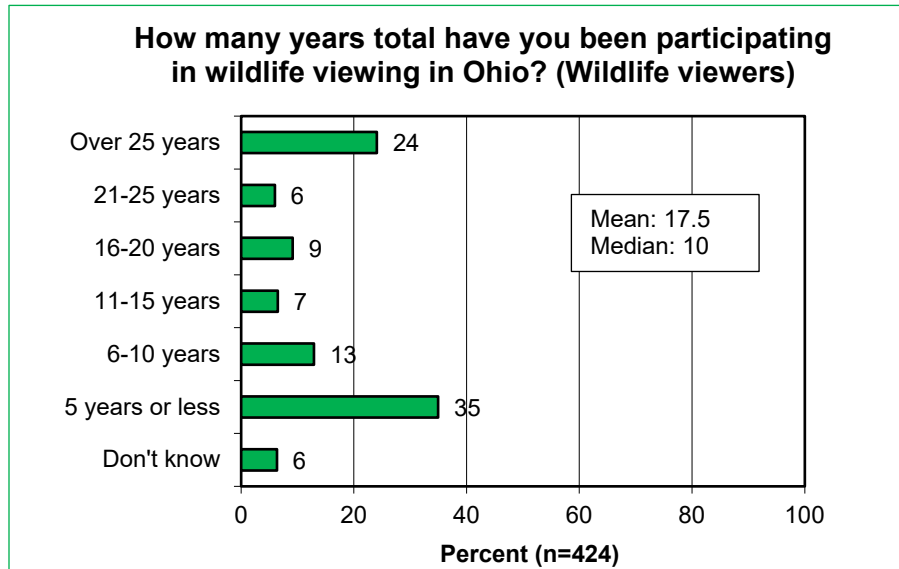


Percent of each of the following groups who fed or planned to feed wildlife in Ohio in 2022: (Wildlife viewers)



Percent of each of the following groups who maintained or planned to maintain natural areas of at least a quarter acre around their home or property to benefit fish or wildlife in Ohio in 2022: (Wildlife viewers)



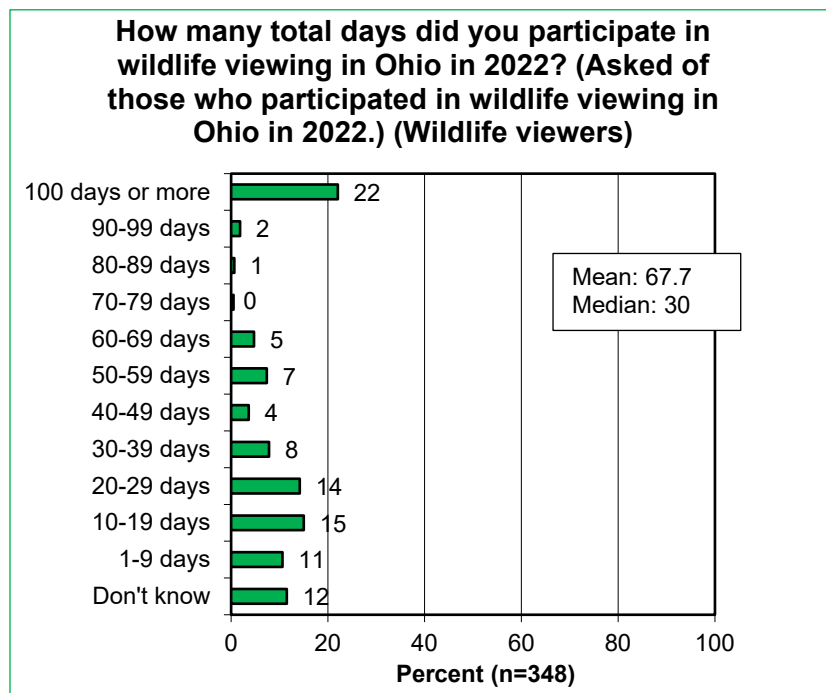
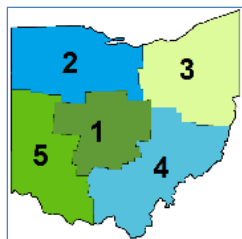


Years of participation in wildlife viewing runs the gamut, with 35% having done so for no more than 5 years, and 24% having done so for more than 25 years. The mean is 17.5 years, and the median is 10 years. The District results are shown below the graph.

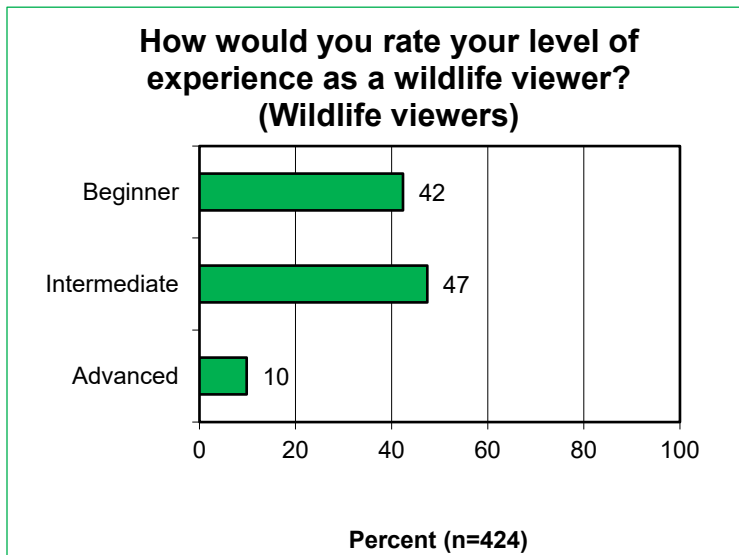
How many years total have you been participating in wildlife viewing in Ohio? (Wildlife viewers)

Percentages	District 1	District 2	District 3	District 4	District 5
Over 25 years	15	24	33	17	22
21-25 years	7	2	5	11	6
16-20 years	10	4	10	13	9
11-15 years	6	6	4	7	10
6-10 years	17	16	11	10	13
5 years or less	37	38	34	37	32
Don't know	8	10	3	4	8
Mean years	13.87	15.54	21.18	15.09	16.99*
Median years	10	10	15	11	11.5

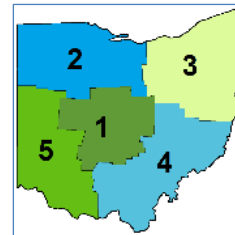
The days of participation in wildlife viewing in Ohio in 2022 are presented on the accompanying graph. The mean is 67.74 days, and the median is 30 days. On the following page is the table of District results.



How many total days did you participate in wildlife viewing in Ohio in 2022? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
100 days or more	17	19	26	22	23
90-99 days	0	1	3	5	1
80-89 days	0	0	0	4	1
70-79 days	0	0	0	2	1
60-69 days	4	4	7	2	4
50-59 days	11	10	7	4	5
40-49 days	4	6	5	0	1
30-39 days	7	9	9	7	7
20-29 days	19	13	12	15	13
10-19 days	15	16	13	22	15
1-9 days	10	10	9	7	15
Don't know	13	13	9	11	13
Mean days	58.8	61.4	76.8	69.1	65.3
Median days	25	30	45	30	30



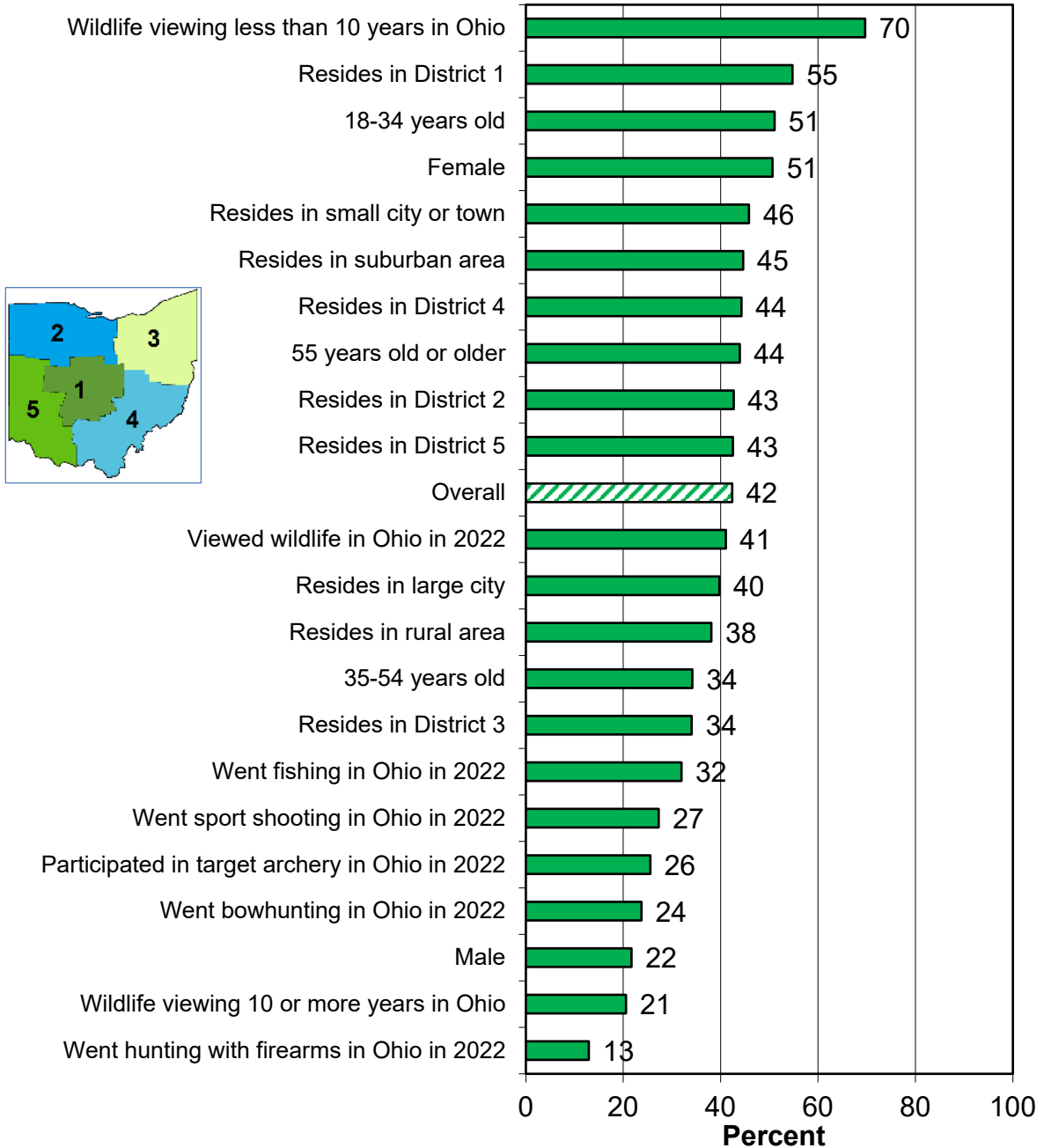
Self-professed levels of experience in wildlife viewing are shown. Most commonly, wildlife viewers rate themselves as intermediate. A very low percentage think of themselves as advanced.



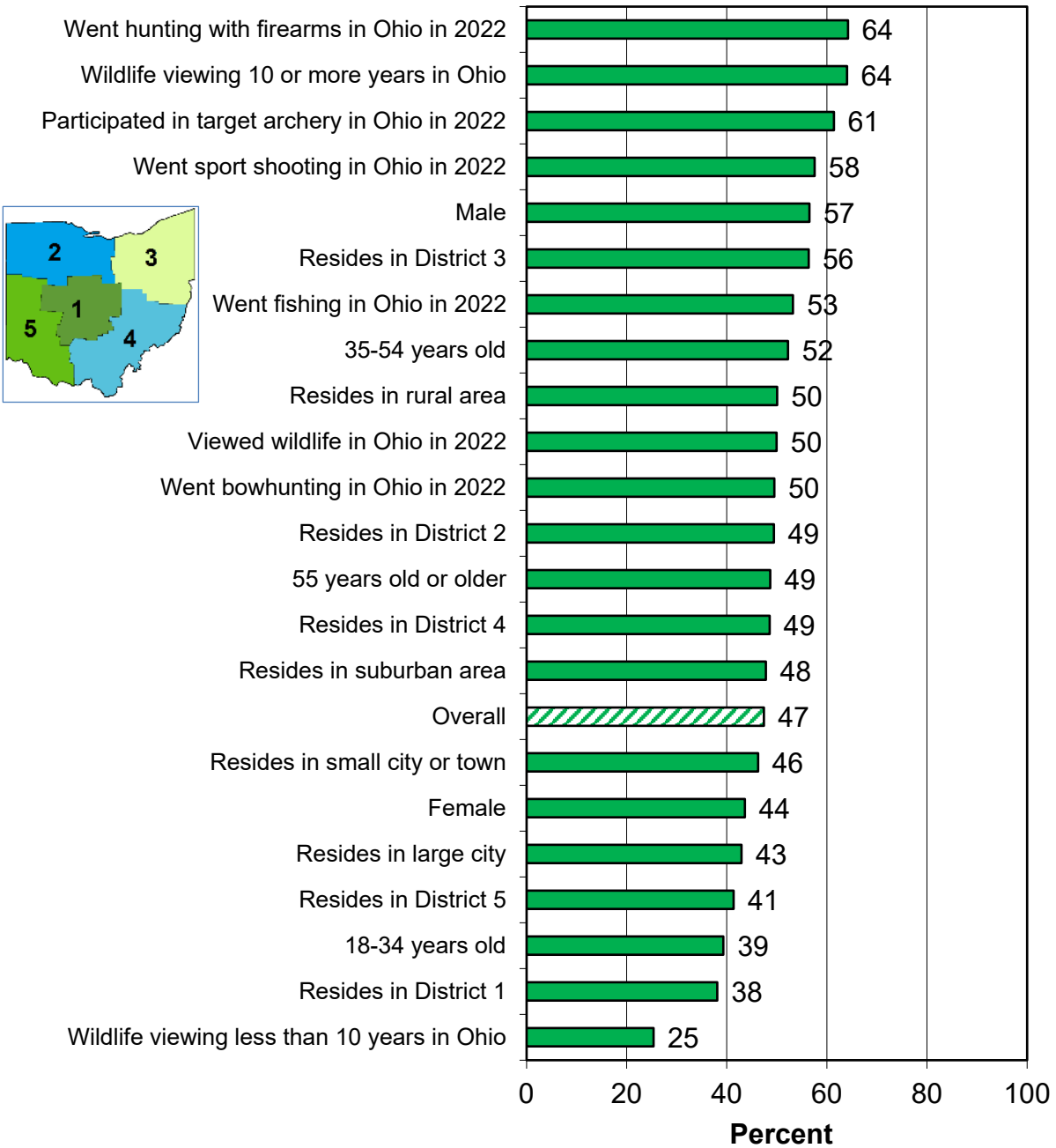
How would you rate your level of experience as a wildlife viewer? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Beginner	55	43	34	44	43
Intermediate	38	49	56	49	41
Advanced	7	6	10	6	16
Don't know	0	2	0	1	0

Three demographic analyses graphs show those wildlife viewer groups most likely to rate their experience as a wildlife viewer as beginner, intermediate, or advanced.

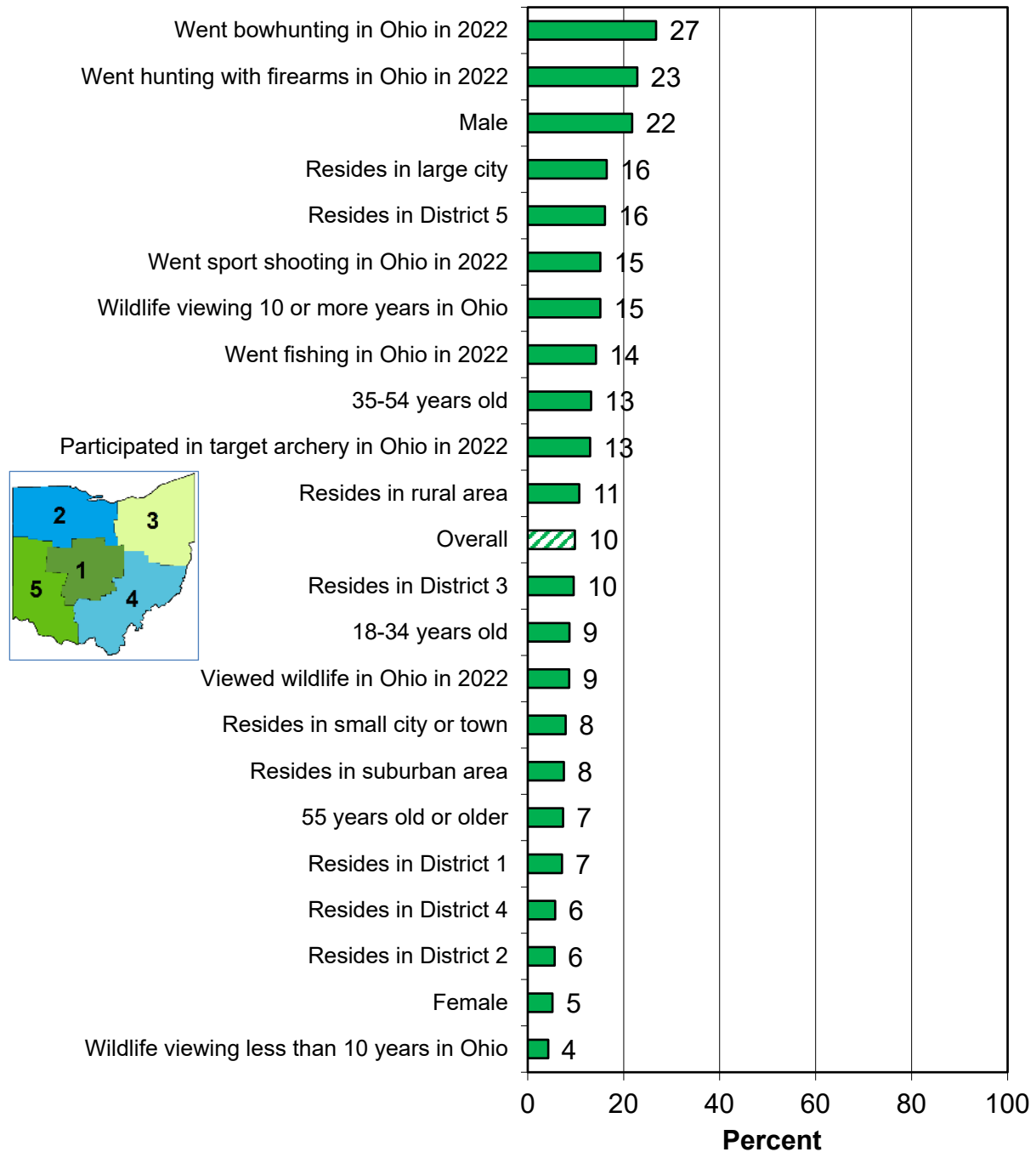
Percent of each of the following groups who rate their experience as a wildlife viewer as beginner: (Wildlife viewers)



Percent of each of the following groups who rate their experience as a wildlife viewer as intermediate: (Wildlife viewers)

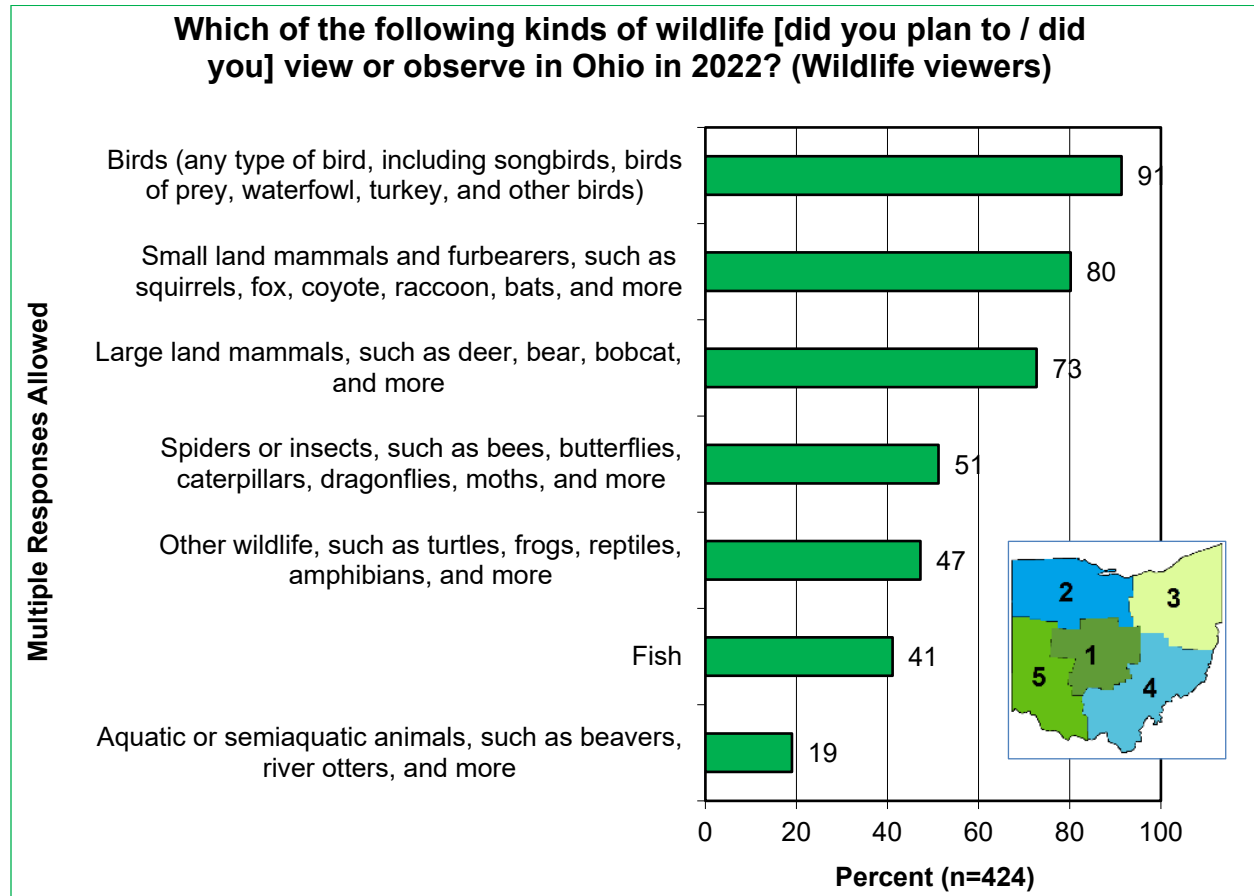


Percent of each of the following groups who rate their experience as a wildlife viewer as advanced: (Wildlife viewers)



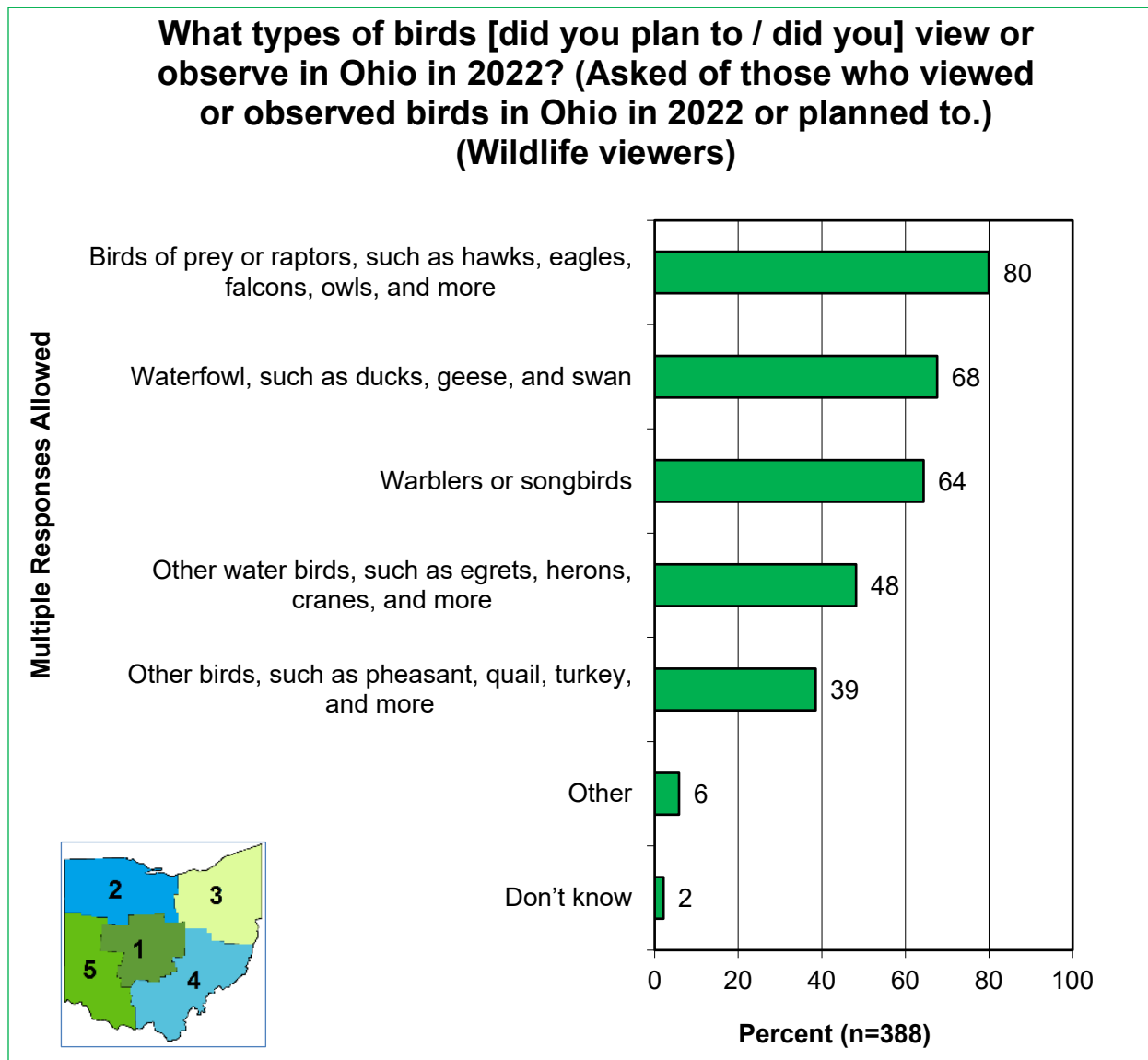
WILDLIFE VIEWING ACTIVITIES

Birds are the leading type of viewed wildlife in Ohio, with 91% of wildlife viewers seeking to see birds. Also in the top tier are small and large mammals—viewed by about three quarters or more. District results are presented in the table under the graph.



Which of the following kinds of wildlife [did you plan to / did you] view or observe in Ohio in 2022? (Multiple Responses Allowed) (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Birds (any type of bird, including songbirds, birds of prey, waterfowl, turkey, and other birds)	88	93	91	91	93
Small land mammals and furbearers, such as squirrels, fox, coyote, raccoon, bats, and more	77	79	85	76	78
Large land mammals, such as deer, bear, bobcat, and more	80	61	78	86	61
Spiders or insects, such as bees, butterflies, caterpillars, dragonflies, moths, and more	56	45	50	46	54
Other wildlife, such as turtles, frogs, reptiles, amphibians, and more	46	47	46	46	51
Fish	35	42	43	37	46
Aquatic or semiaquatic animals, such as beavers, river otters, and more	15	18	20	23	20
Don't know	0	0	0	0	1

A follow-up question asked about types of birds viewed. Birds of prey/raptors lead the list. In a second tier are waterfowl and warblers/songbirds. District results follow the graph.

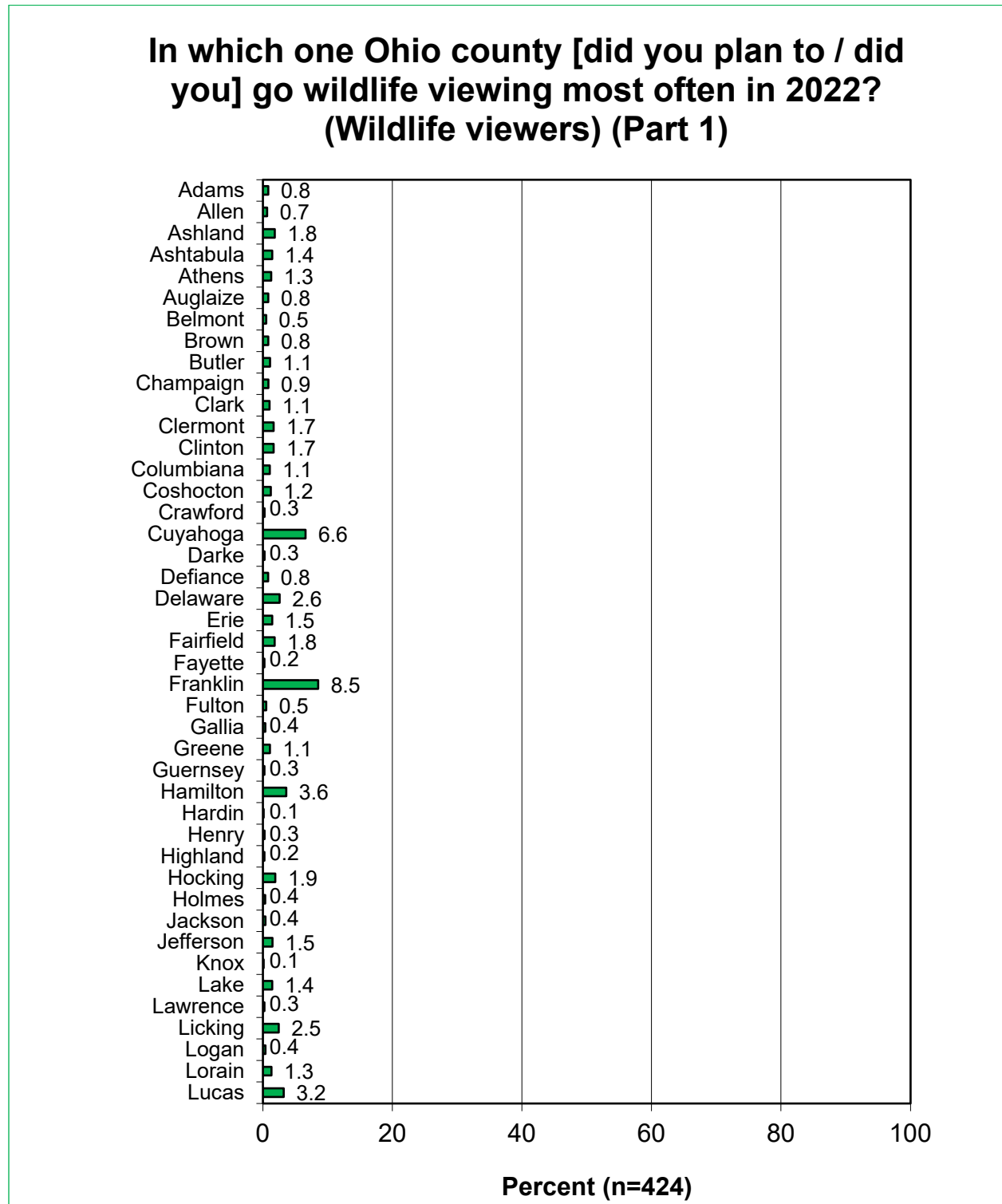


What types of birds [did you plan to / did you] view or observe in Ohio in 2022? (Asked of those who viewed or observed birds in Ohio in 2022 or planned to.) (Multiple Responses Allowed) (Wildlife viewers)

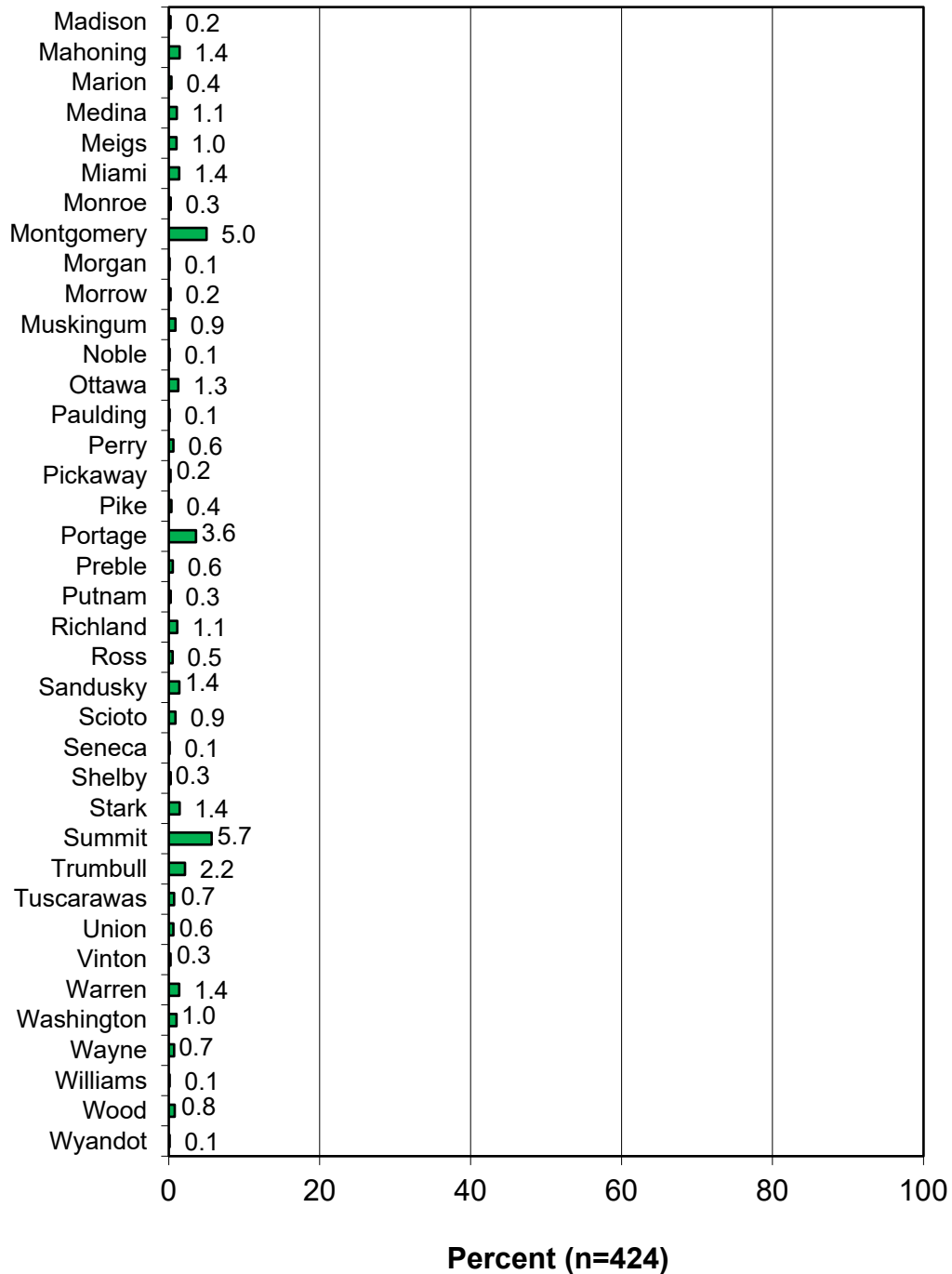
Percentages	District 1	District 2	District 3	District 4	District 5
Birds of prey or raptors, such as hawks, eagles, falcons, owls, and more	82	71	81	73	83
Waterfowl, such as ducks, geese, and swan	62	72	69	69	68
Warblers or songbirds	70	54	60	77	65
Other water birds, such as egrets, herons, cranes, and more	45	45	55	44	46
Other birds, such as pheasant, quail, turkey, and more	32	29	45	50	35
Other	5	5	7	3	6
Don't know	3	4	1	2	2

WILDLIFE VIEWING LOCATIONS

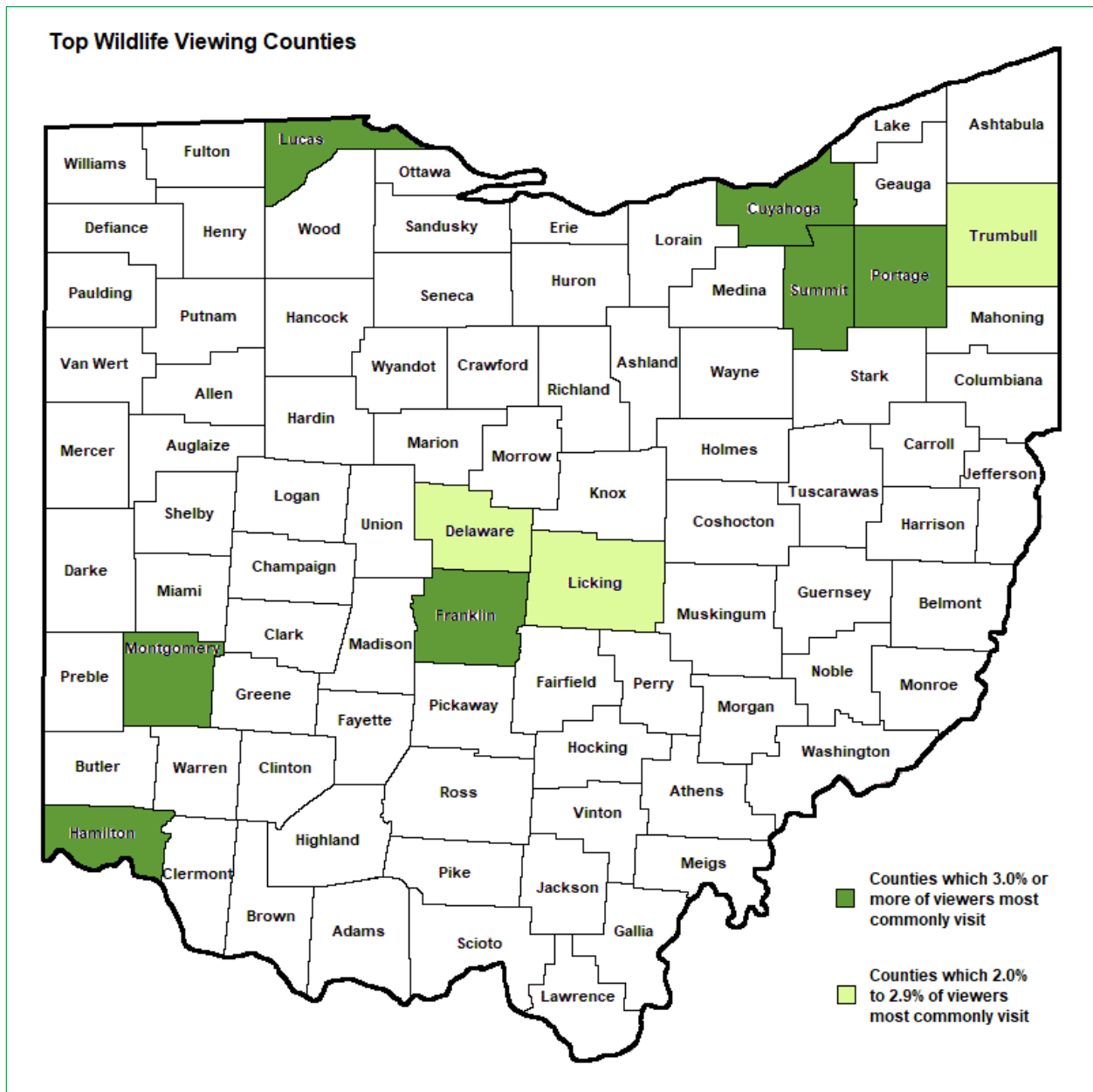
Wildlife viewing is so ubiquitous that the top wildlife viewing counties correspond to those counties that are near to populous areas. Additionally, well more than a third of wildlife viewers typically travel less than 10 miles to view wildlife. These graphs and maps are presented on the following pages.



**In which one Ohio county [did you plan to / did you] go wildlife viewing most often in 2022?
(Wildlife viewers) (Part 2)**



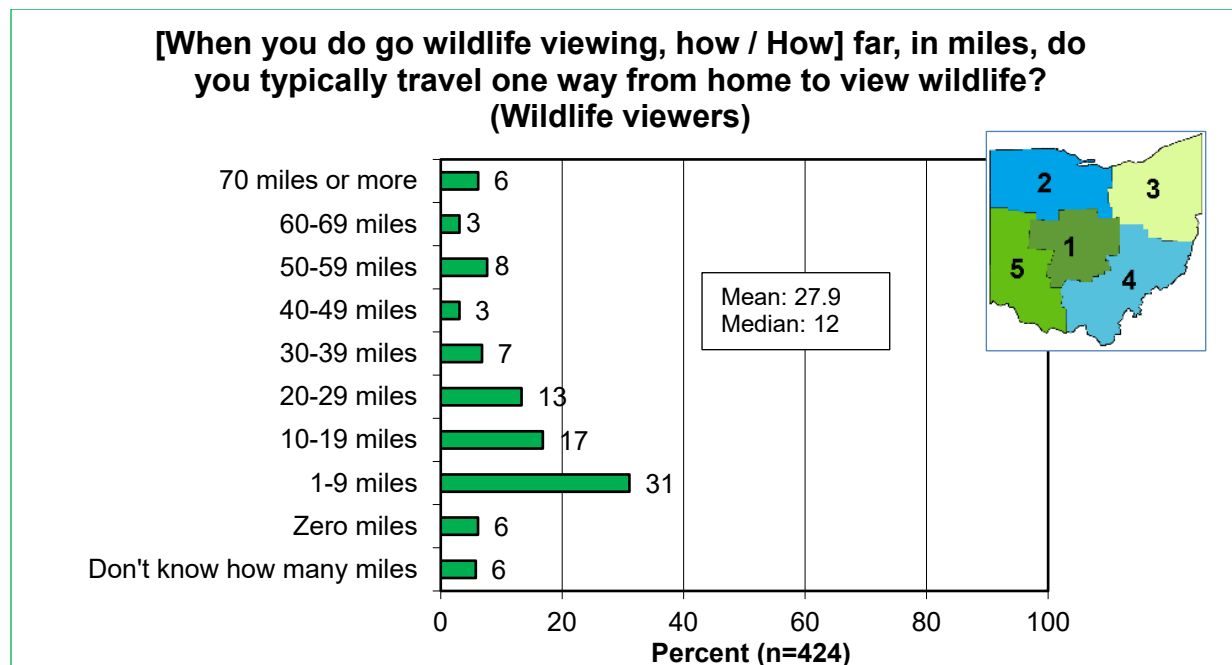
The top counties for wildlife viewing are near Cleveland, Columbus, Cincinnati, Dayton, and Toledo.



The results regarding most-visited county are presented in the table starting on the next page. The District breakdown is by where the wildlife viewer lives. Most wildlife viewers participate within the District in which they live, as the median typical travel distance is only 12 miles. Note that the mean is somewhat longer, 27.88 miles, pulled up by some viewers who travel quite far, as 6% of wildlife viewers travel 70 or more miles to view wildlife (this graph follows the table).

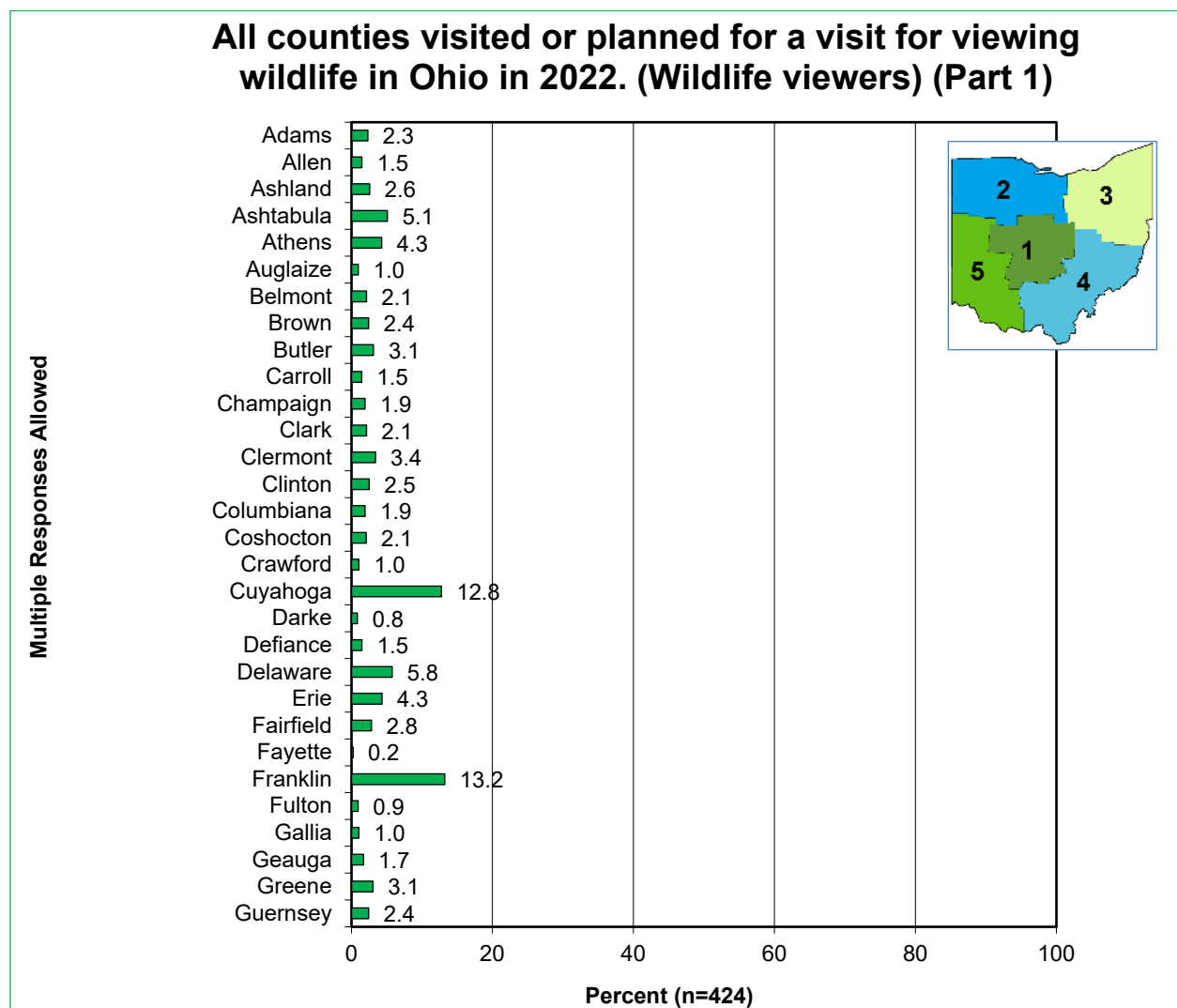
In which one Ohio county [did you plan to / did you] go wildlife viewing most often in 2022? (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	0	0	0	0	3
Allen	0	6	0	0	0
Ashland	0	2	4	1	0
Ashtabula	0	0	4	0	0
Athens	1	1	0	10	0
Auglaize	0	0	0	0	3
Belmont	0	0	0	6	0
Brown	0	0	0	0	3
Butler	0	0	0	0	5
Champaign	2	0	1	0	0
Clark	2	0	0	0	2
Clermont	0	0	0	0	7
Clinton	0	0	0	0	7
Columbiana	0	0	3	0	0
Coshocton	0	0	2	6	0
Crawford	0	2	0	0	0
Cuyahoga	2	0	16	1	2
Darke	0	0	0	0	1
Defiance	0	4	0	0	1
Delaware	12	0	0	1	0
Erie	1	10	0	0	0
Fairfield	7	0	1	0	0
Fayette	1	0	0	0	0
Franklin	37	1	1	1	1
Fulton	0	4	0	0	0
Gallia	0	0	0	4	0
Greene	0	2	0	0	3
Guernsey	0	0	0	3	0
Hamilton	0	0	0	0	15
Hardin	0	1	0	0	0
Henry	0	2	0	0	0
Highland	1	0	0	0	0
Hocking	2	0	1	6	2
Holmes	0	0	1	0	0
Jackson	0	0	0	1	1
Jefferson	0	0	3	1	1
Knox	0	1	0	0	0
Lake	0	0	4	0	0
Lawrence	0	0	0	3	0
Licking	12	0	0	0	0
Logan	0	0	0	1	1
Lorain	1	0	3	0	0
Lucas	0	27	0	0	0
Madison	1	0	0	0	0
Mahoning	0	0	4	0	0
Marion	1	1	0	0	0
Medina	0	0	3	0	0
Meigs	1	0	0	6	1
Miami	0	0	0	0	6
Monroe	0	0	0	0	1
Montgomery	0	0	0	0	21
Morgan	0	0	0	1	0

In which one Ohio county [did you plan to / did you] go wildlife viewing most often in 2022? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Morrow	1	0	0	0	0
Muskingum	0	0	0	10	0
Noble	0	0	0	1	0
Ottawa	1	6	1	0	0
Paulding	0	1	0	0	0
Perry	1	0	0	4	0
Pickaway	1	0	0	0	0
Pike	1	0	0	1	0
Portage	0	0	11	0	0
Preble	0	0	0	0	2
Putnam	0	2	0	0	0
Richland	1	4	1	0	0
Ross	0	0	0	6	0
Sandusky	1	7	1	0	0
Scioto	1	0	0	7	0
Seneca	0	1	0	0	0
Shelby	0	0	0	0	1
Stark	0	0	4	0	0
Summit	0	2	16	0	0
Trumbull	0	0	6	0	0
Tuscarawas	0	0	2	0	0
Union	2	1	0	0	0
Vinton	0	0	0	3	0
Warren	0	0	0	0	6
Washington	0	0	0	11	0
Wayne	0	0	2	0	0
Williams	0	1	0	0	0
Wood	0	7	0	0	0
Wyandot	0	1	0	0	0



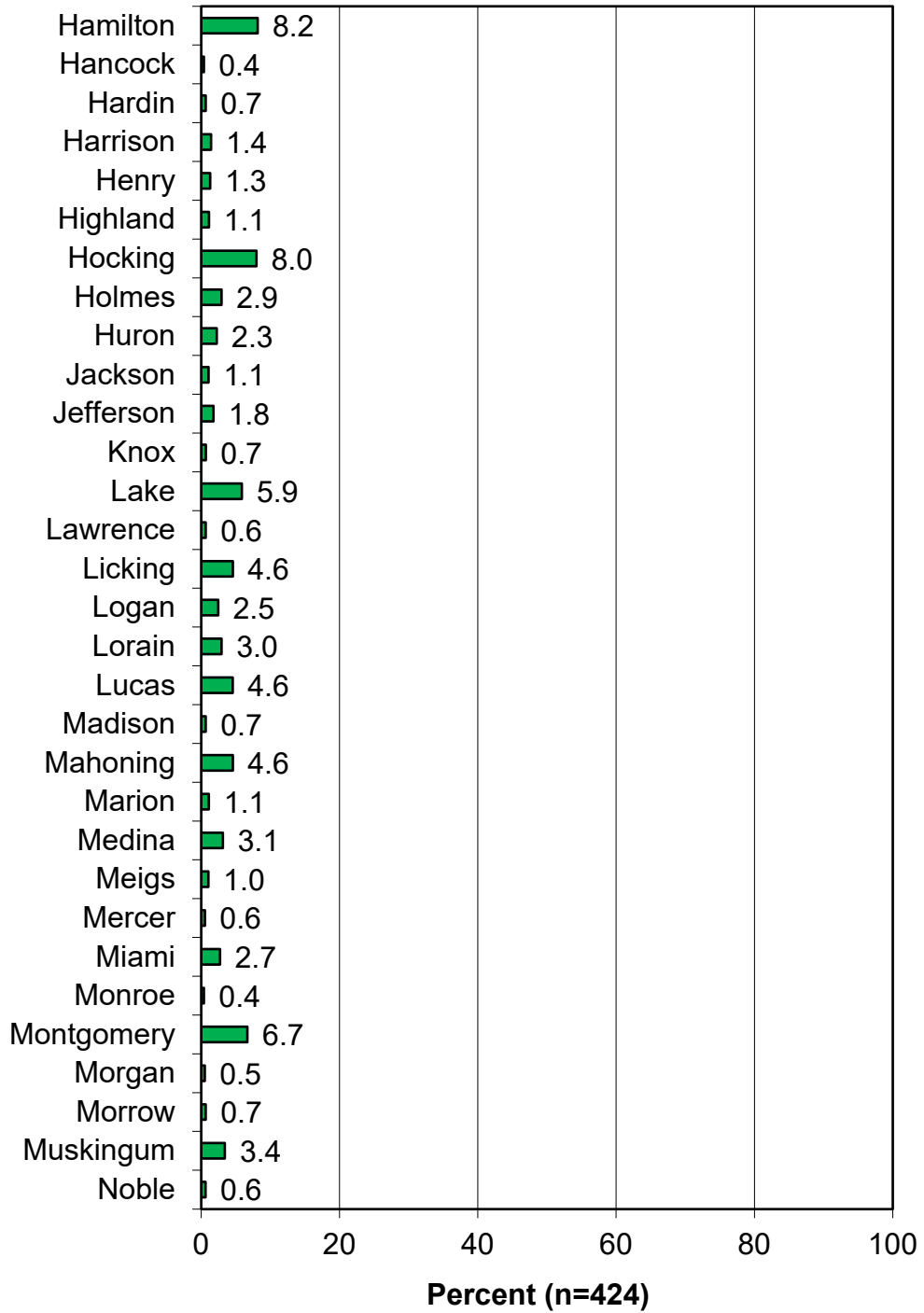
[When you do go wildlife viewing, how / How] far, in miles, do you typically travel one way from home to view wildlife? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
70 miles or more	1	7	7	7	8
60-69 miles	4	2	5	0	1
50-59 miles	8	6	7	9	8
40-49 miles	6	6	1	3	2
30-39 miles	7	7	5	11	7
20-29 miles	15	11	12	13	15
10-19 miles	14	17	19	13	17
1-9 miles	29	35	31	33	31
0 miles	6	2	9	7	5
Don't know how many miles	10	8	3	4	6
Mean miles	22.0	26.0	31.9	24.3	29.2
Median miles	15	10	10	10	15

Below and in the next pages are graphs showing all counties visited for wildlife viewing, including the most-visited as well as any other counties that were visited.



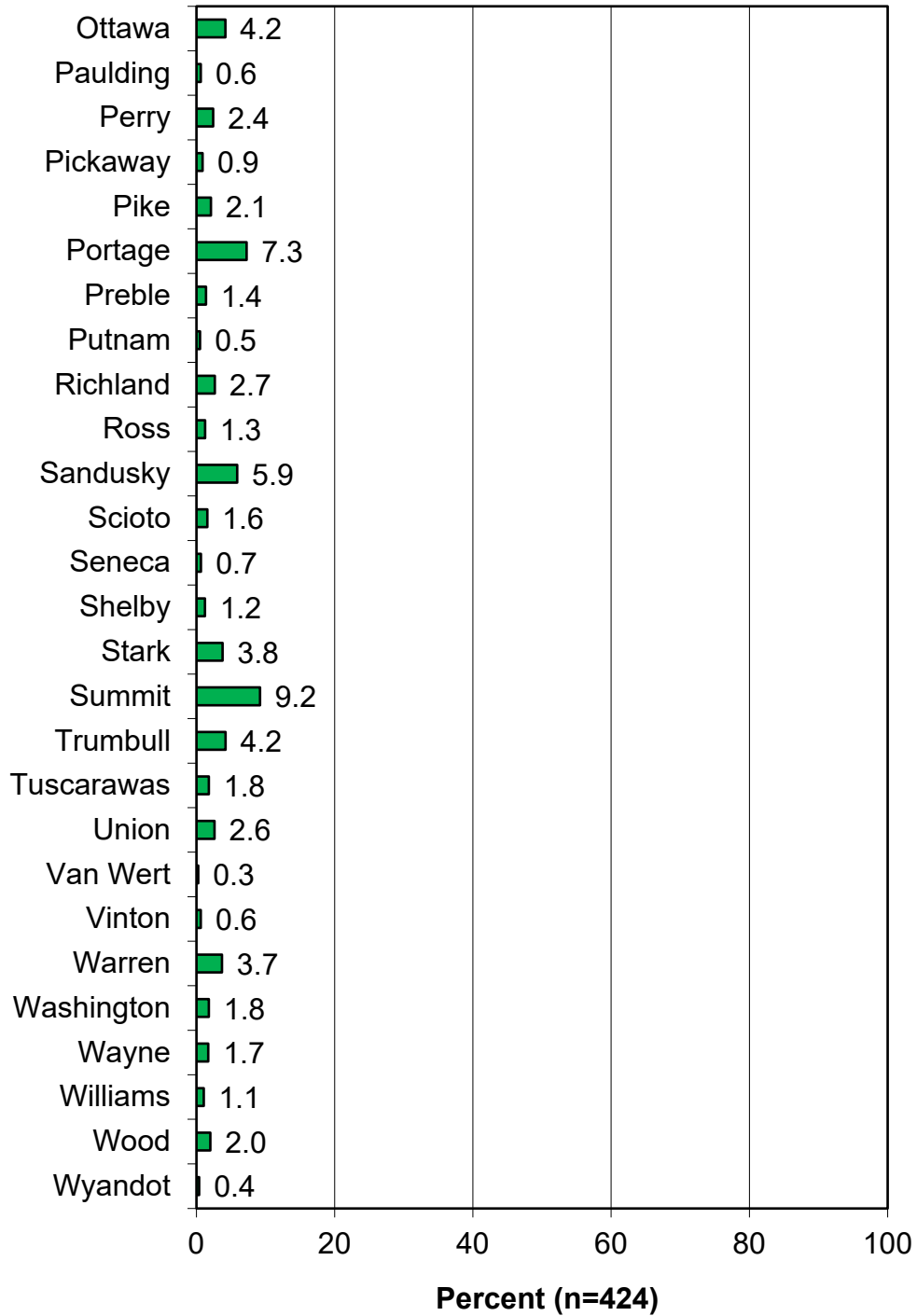
**All counties visited or planned for a visit for viewing wildlife in Ohio in 2022.
(Wildlife viewers) (Part 2)**

Multiple Responses Allowed



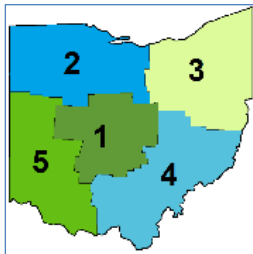
**All counties visited or planned for a visit for viewing wildlife in Ohio in 2022.
(Wildlife viewers) (Part 3)**

Multiple Responses Allowed

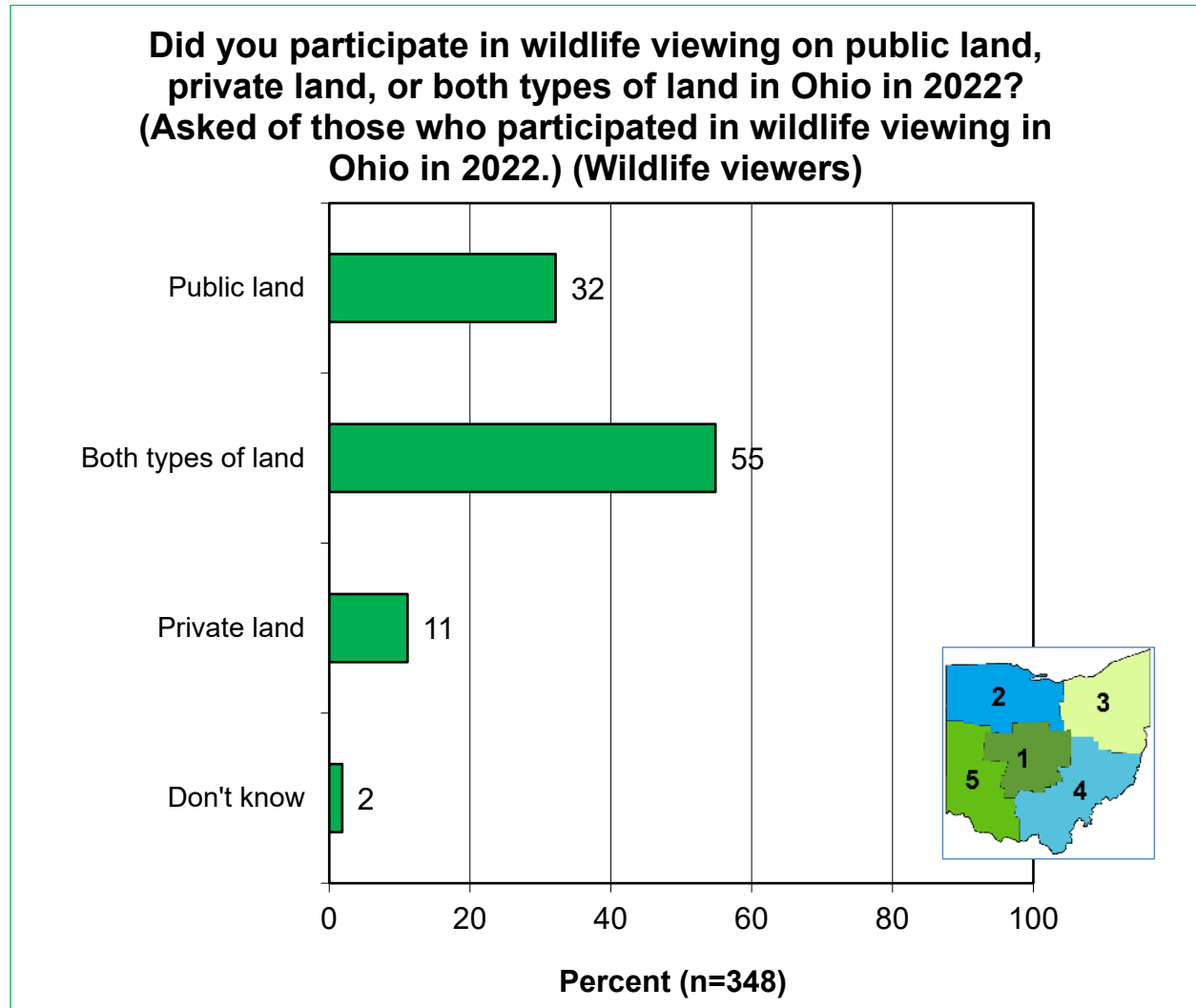


All counties visited or planned for a visit for wildlife viewing in Ohio in 2022. (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Adams	1	0	0	1	8
Allen	0	10	0	0	1
Ashland	1	3	5	1	0
Ashtabula	2	0	13	0	1
Athens	6	2	0	21	3
Auglaize	0	1	0	0	3
Belmont	0	0	3	9	1
Brown	0	1	1	0	8
Butler	0	4	1	0	9
Carroll	1	1	3	0	0
Champaign	4	0	1	0	3
Clark	4	0	0	0	6
Clermont	0	0	1	0	13
Clinton	0	0	0	0	10
Columbiana	0	0	5	1	0
Coshocton	2	0	3	6	0
Crawford	1	6	0	1	0
Cuyahoga	6	4	29	1	5
Darke	0	0	0	0	3
Defiance	0	10	0	0	1
Delaware	24	0	2	1	0
Erie	4	15	4	1	1
Fairfield	11	0	1	3	0
Fayette	1	0	0	0	0
Franklin	51	2	2	3	6
Fulton	0	8	0	0	0
Gallia	0	1	0	10	0
Geauga	0	2	4	0	0
Greene	0	2	0	0	11
Guernsey	1	1	2	9	2
Hamilton	0	2	3	1	28
Hancock	0	3	0	0	0
Hardin	1	3	0	0	0
Harrison	1	0	1	3	2
Henry	2	7	0	0	0
Highland	2	0	1	0	1
Hocking	10	3	1	27	11
Holmes	1	2	6	3	0
Huron	0	4	4	0	1
Jackson	1	0	0	3	2
Jefferson	0	0	3	1	2
Knox	0	3	0	0	1
Lake	0	1	15	1	2
Lawrence	0	0	0	7	0
Licking	20	1	0	3	0
Logan	2	3	1	7	2
Lorain	1	4	6	0	0
Lucas	0	38	0	0	0
Madison	1	1	0	0	1
Mahoning	1	0	13	0	0
Marion	5	1	0	0	0
Medina	1	0	9	0	0
Meigs	1	0	0	6	1

All counties visited or planned for a visit for wildlife viewing in Ohio in 2022. (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Mercer	0	0	0	0	2
Miami	2	0	0	0	9
Monroe	0	0	0	1	1
Montgomery	0	0	0	0	28
Morgan	0	0	0	6	0
Morrow	1	1	0	0	1
Muskingum	5	1	1	21	0
Noble	1	0	0	4	0
Ottawa	2	11	5	0	2
Paulding	0	2	1	0	0
Perry	6	0	0	10	1
Pickaway	2	0	0	1	1
Pike	1	0	1	7	3
Portage	2	1	19	1	0
Preble	0	0	0	0	6
Putnam	0	4	0	0	0
Richland	4	9	2	1	0
Ross	4	0	0	6	0
Sandusky	2	22	6	0	2
Scioto	1	0	0	9	2
Seneca	1	3	0	0	0
Shelby	0	0	0	1	5
Stark	0	1	10	1	1
Summit	0	3	26	1	0
Trumbull	1	0	12	0	0
Tuscarawas	0	0	5	0	0
Union	11	1	0	0	1
Van Wert	0	2	0	0	0
Vinton	1	0	0	4	0
Warren	0	0	1	0	14
Washington	0	0	1	13	1
Wayne	0	0	4	0	1
Williams	0	8	0	1	0
Wood	0	17	0	0	0
Wyandot	0	3	0	0	0



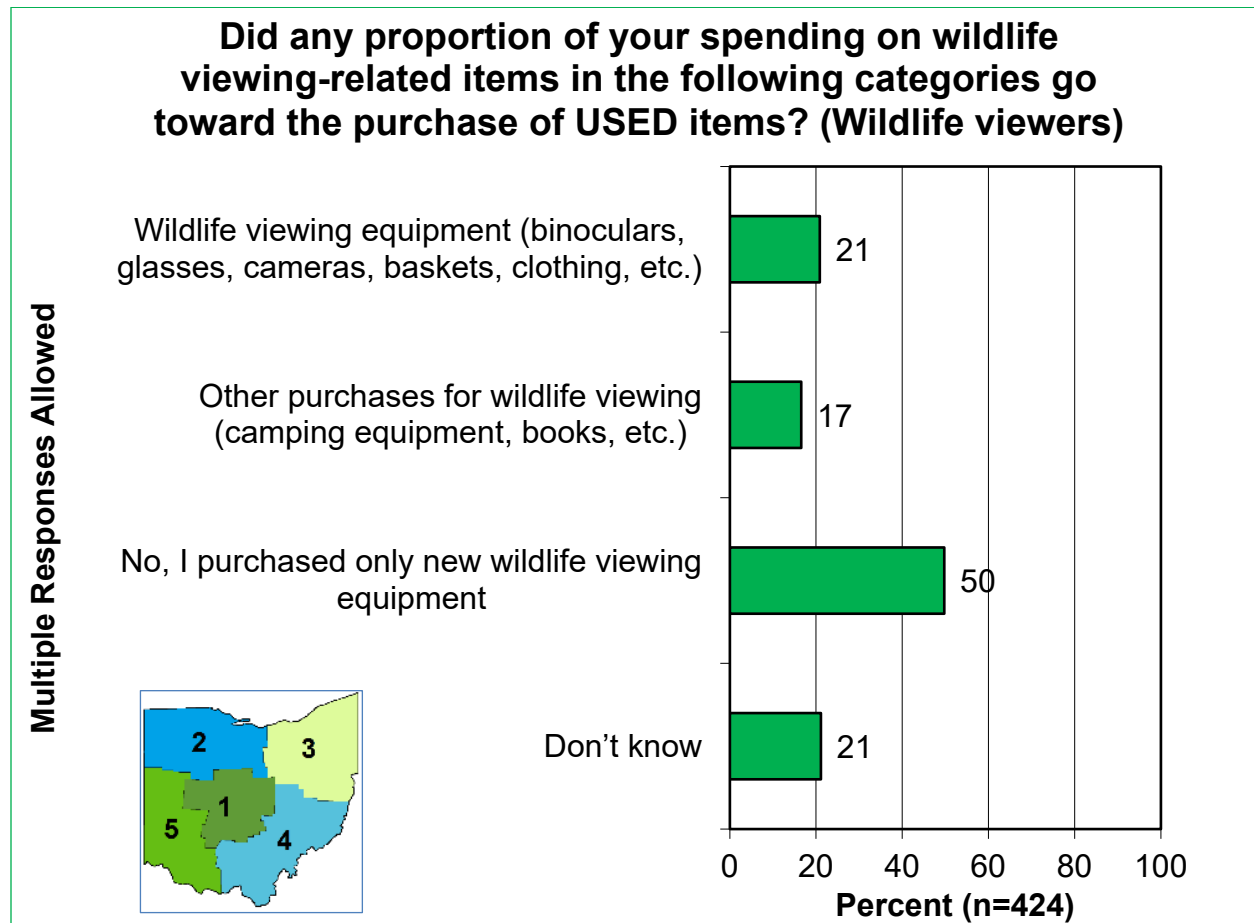
Most commonly, wildlife viewers use both types of land, public and private, for their wildlife viewing. About a third exclusively use public land, three times the rate who exclusively use private land. In total, 87% use public land for at least some of their viewing; 66% use private land. District results are presented as well.



Did you participate in wildlife viewing on public land, private land, or both types of land in Ohio in 2022? (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Public land	44	34	26	22	32
Both types of land	46	54	59	62	55
Private land	7	7	13	16	12
Don't know	3	4	1	0	1

WILDLIFE VIEWING EXPENDITURES (USED)

Half of wildlife viewers only purchased new equipment rather than used. District results are tabulated below the graph.

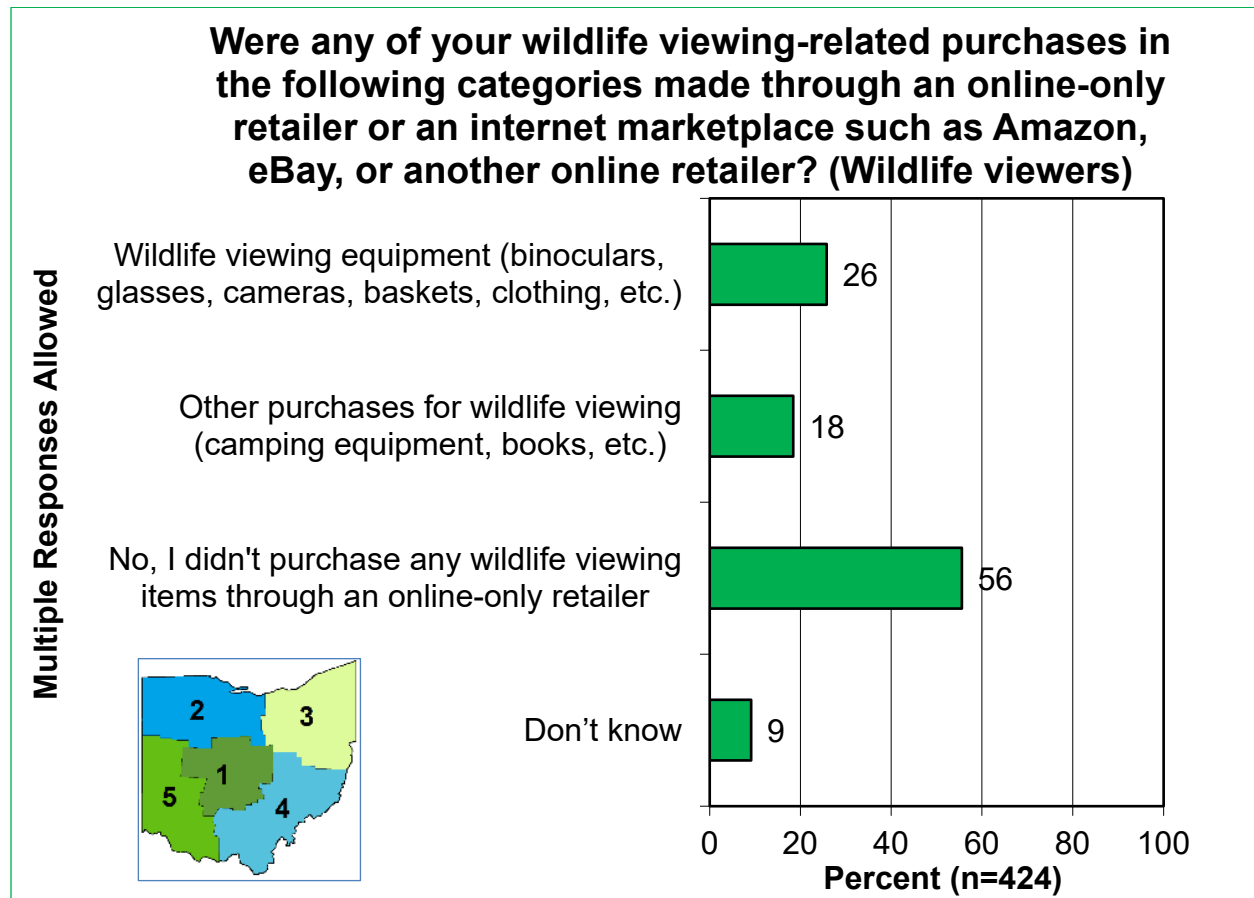


Did any proportion of your spending on wildlife viewing-related items in the following categories go toward the purchase of used items? (Wildlife viewers)					
<i>Percentages</i>	District 1	District 2	District 3	District 4	District 5
Wildlife viewing equipment (binoculars, glasses, cameras, baskets, clothing, etc.)	24	20	17	30	21
Other purchases for wildlife viewing (camping equipment, books, etc.)	15	20	17	20	14
No, I purchased only new wildlife viewing equipment	45	40	55	40	54
Don't know	27	30	16	21	18

What proportion of your annual wildlife viewing-related spending on [equipment / other] went toward the purchase of USED items? (Wildlife viewers)						
<i>Mean Percentages</i>	Overall	District 1	District 2	District 3	District 4	District 5
Wildlife viewing equipment (binoculars, glasses, cameras, baskets, clothing, etc.)	8.7	9.2	8.7	5.3	15.4	10.4
Other purchases for wildlife viewing (camping equipment, books, etc.)	5.8	4.8	7.9	5.6	7.4	5.2

WILDLIFE VIEWING EXPENDITURES (ONLINE)

Most wildlife viewers (56%) did not spend anything through an online-only retailer or internet marketplace. Following the graph are the District results.



Were any of your wildlife viewing-related purchases in the following categories made through an online-only retailer or an or an internet marketplace such as Amazon, eBay, or another online retailer? (Wildlife viewers)

Percentages	District 1	District 2	District 3	District 4	District 5
Wildlife viewing equipment (binoculars, glasses, cameras, baskets, clothing, etc.)	23	31	28	20	25
Other purchases for wildlife viewing (camping equipment, books, etc.)	15	24	16	19	22
No, I didn't purchase any wildlife viewing items through an online-only retailer	60	44	56	57	56
Don't know	11	13	9	11	6

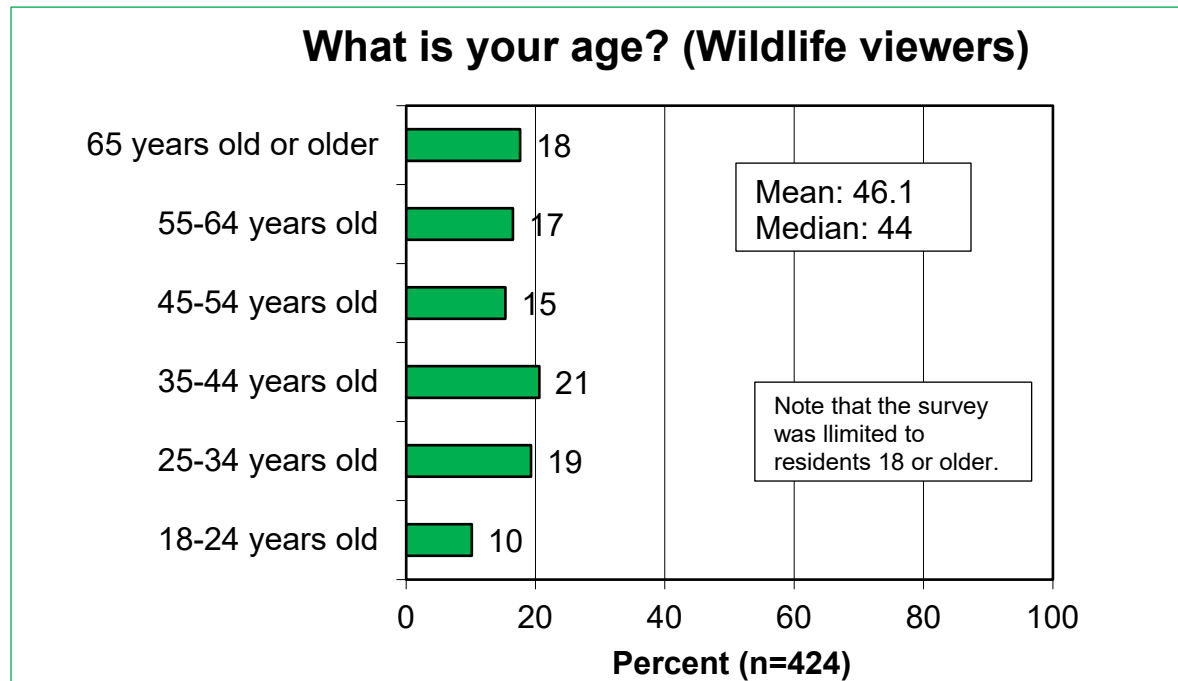
What proportion of your annual wildlife viewing-related spending on [equipment / other] went toward the purchase of items through an online-only retailer or an or an internet marketplace? (Wildlife viewers)

Mean Percentages	Overall	District 1	District 2	District 3	District 4	District 5
Wildlife viewing equipment (binoculars, glasses, cameras, baskets, clothing, etc.)	14.0	11.5	18.2	14.5	11.8	14.0
Other purchases for wildlife viewing (camping equipment, books, etc.)	8.4	7.4	12.0	5.9	9.0	10.8

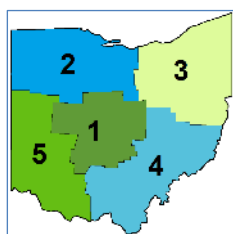
DEMOGRAPHIC CHARACTERISTICS

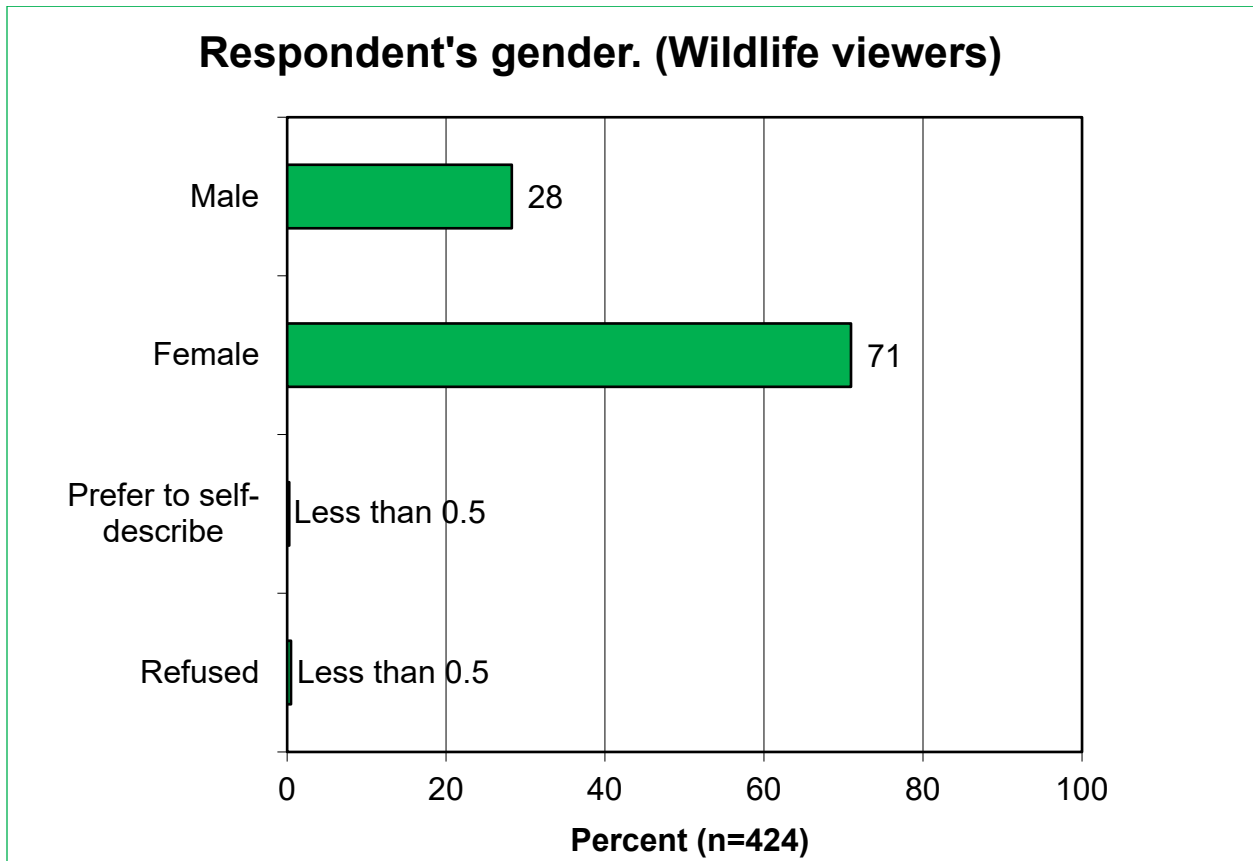
The survey gathered the following information:

- Age.
- Gender.
- Ethnicity.
- Residential area: urban to rural continuum.
- County of residence.

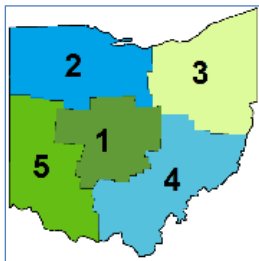


What is your age? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
65 years old or older	11	13	28	9	15
55-64 years old	19	9	15	19	20
45-54 years old	12	21	16	14	15
35-44 years old	26	26	16	24	18
25-34 years old	23	11	20	19	20
18-24 years old	10	19	5	14	11
Don't know	0	0	0	1	1
Mean age (years)	44.1	43.2	49.3	42.9	45.9
Median age (years)	42	43	49.5	42	44.5

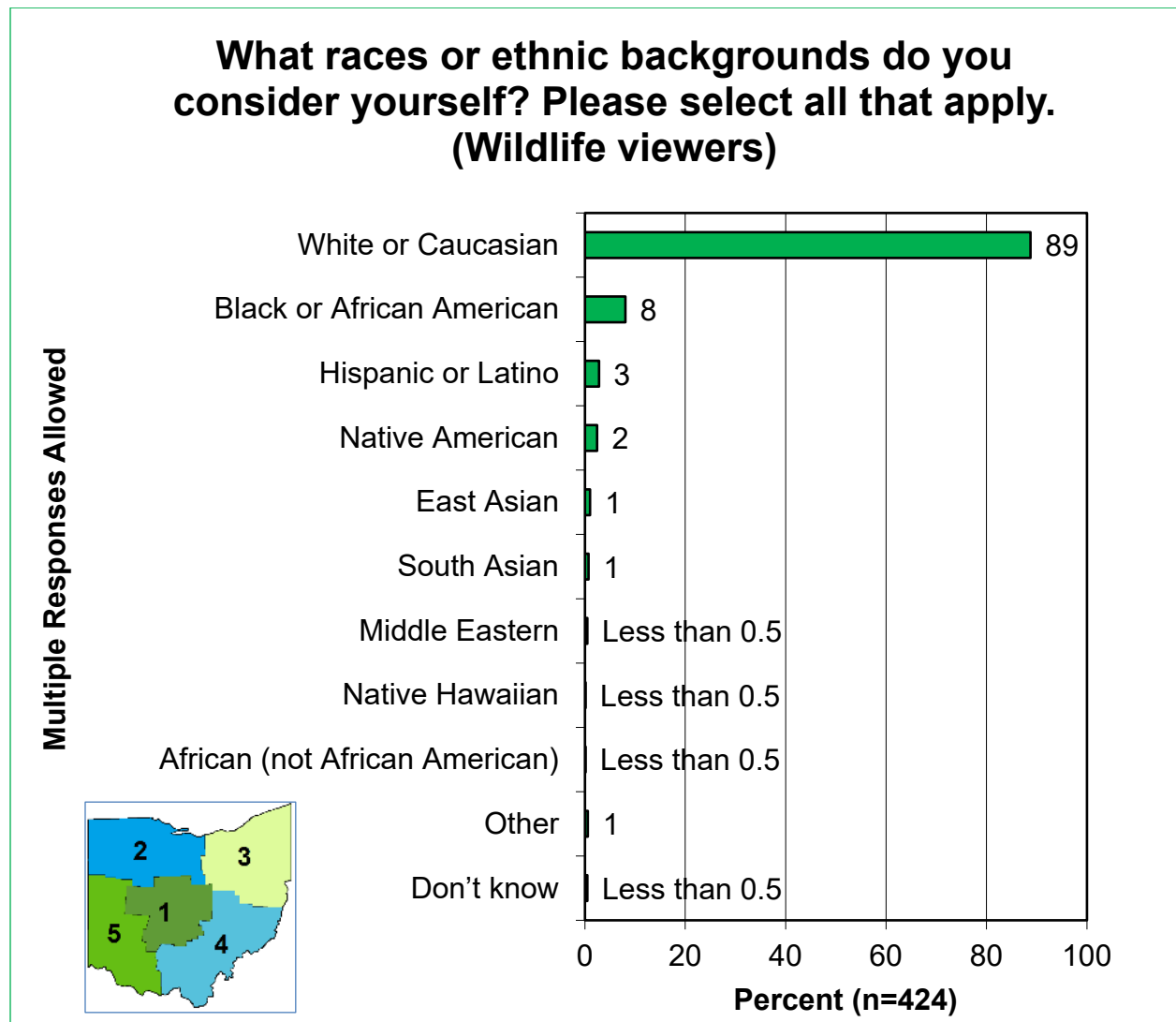




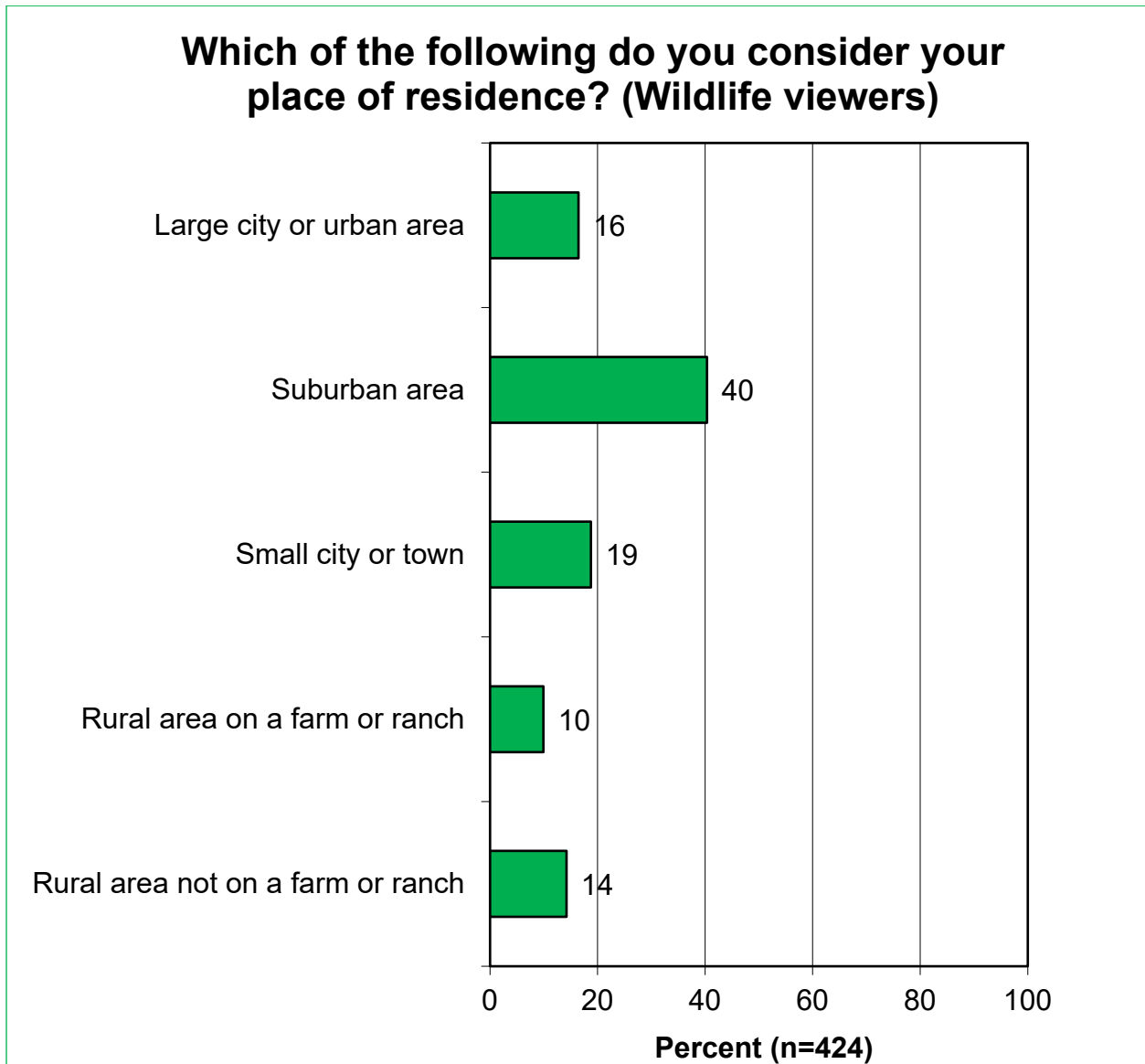
Respondent's gender. (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Male	23	27	31	23	32
Female	77	73	68	76	67
Refused	0	0	1	1	0
Prefer to self-describe	0	0	0	0	1



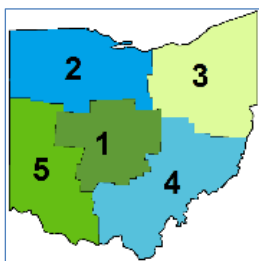
What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Wildlife viewers)



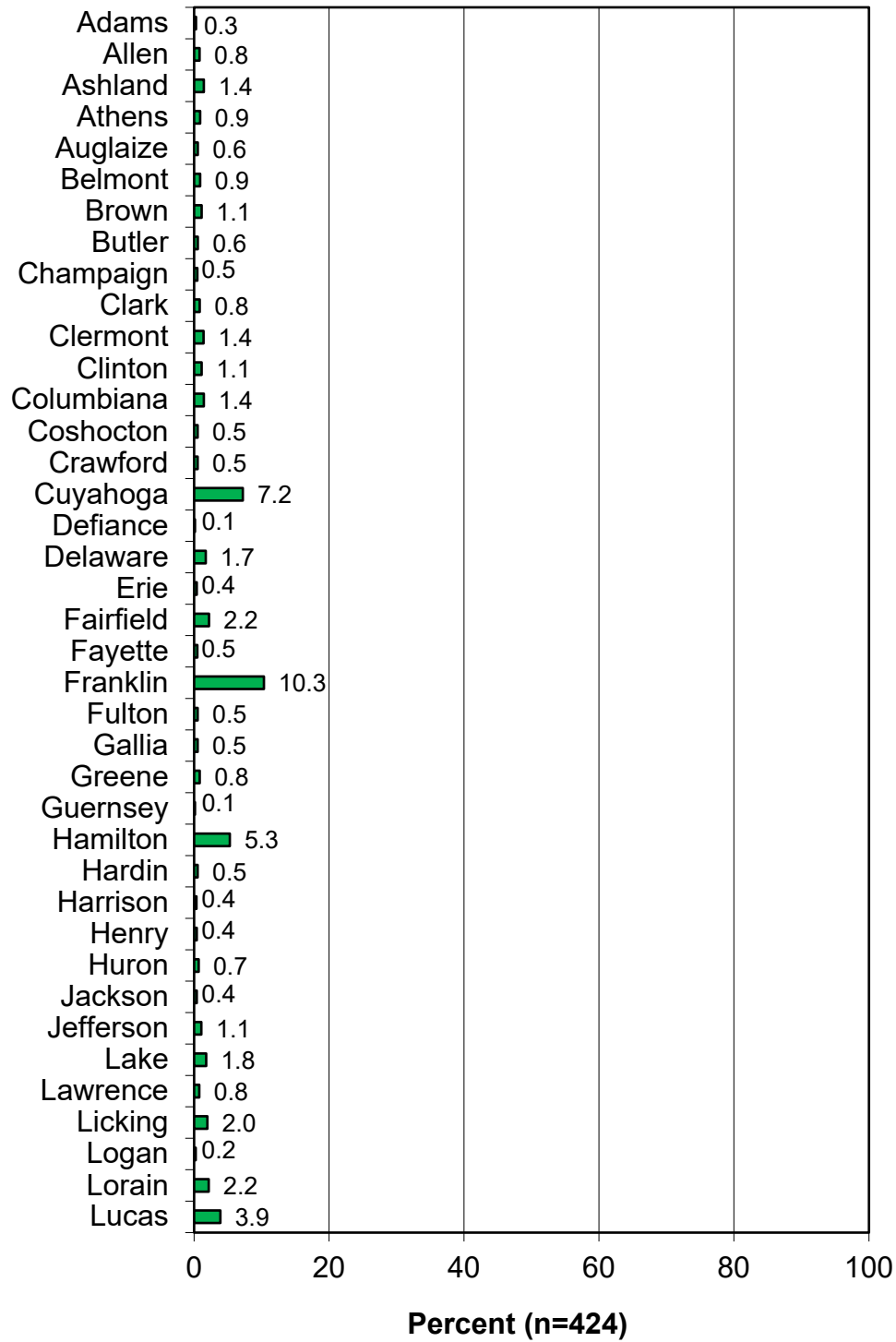
What races or ethnic backgrounds do you consider yourself? Please select all that apply. (Multiple Responses Allowed) (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
White or Caucasian	87	88	86	96	92
Black or African American	7	12	11	1	6
Hispanic or Latino	4	6	2	1	2
Native American	2	2	2	1	3
East Asian	2	2	0	0	1
South Asian	1	1	1	0	0
Middle Eastern	0	1	1	0	0
Native Hawaiian	0	1	0	0	0
African (not African American)	0	1	0	0	0
Other	1	0	1	0	0
Don't know	0	1	1	0	0
Prefer not to say	0	0	0	0	0



Which of the following do you consider your place of residence? (Wildlife viewers)					
Percentages	District 1	District 2	District 3	District 4	District 5
Large city or urban area	25	17	17	1	14
Suburban area	45	29	43	9	51
Small city or town	15	26	16	31	17
Rural area on a farm or ranch	5	13	9	24	9
Rural area not on a farm or ranch	10	13	16	33	9



What county do you live in? (Wildlife viewers) (Part 1)



What county do you live in? (Wildlife viewers) (Part 2)



ECONOMIC IMPACT OF OUTDOOR RECREATION IN OHIO

The economic impact analyses for this project quantified the number of participants, their days of activity, their total spending, and the economic impact of these outdoor activities. This section starts with definitions and methodology to allow for a full understanding of the results.

ECONOMIC ANALYSIS DEFINITIONS

Input-output models describe how spending in one industry affects other industries within an economy. For example, once a consumer makes a purchase, the retailer buys more merchandise from wholesalers, who buy more from manufacturers, who, in turn, purchase new inputs and supplies. In addition, the salaries and wages paid by these businesses stimulate more economic activity as workers spend their incomes. In this way, the first purchase creates numerous rounds of additional purchasing.

An input-output analysis tracks the flow of dollars from the consumer through all of the businesses that are affected, either directly or indirectly. The data fed into the economic models used in this project were the dollars spent by hunters, anglers, sport shooters, and wildlife viewers, referred to as their direct spending. These dollars cycle through the economy, generating additional rounds of spending by businesses that provide supporting services and goods. This is known as the multiplier effect and includes:

- **Indirect contributions** arising from spending by businesses supporting those who serve hunters, anglers, sport shooters, and wildlife viewers.
- **Induced contributions** generated by employees of directly or indirectly affected businesses when they spend their paychecks.

The total economic contribution from hunting, fishing, sport shooting and wildlife-viewing as provided in this report is a sum of the direct effects of retail spending by hunters, anglers, recreational shooters, and wildlife viewers plus the indirect and induced spending estimated by the economic models.

Five types of economic activity are measured:

- **Jobs:** The number of full- and part-time jobs created or supported as a result of the economic activity.
- **Income:** All forms of employment income, including employee compensation (wages, salaries, and benefits) and proprietor income.
- **State GDP:** This represents the value added to the Ohio economy based on the economic activity from all the businesses affected by dollars spent for hunting, fishing, sport shooting, and wildlife viewing.
- **Tax Revenue:** All local, state, and federal taxes generated as a result of the economic activity associated with hunting, fishing, sport shooting, and wildlife viewing in Ohio. This report presents state and local taxes separately from federal taxes.
- **Total Output:** The total value of all sales, including both the final purchase as well as the sale of intermediate inputs, by businesses throughout the economy under study associated with hunting, fishing, sport shooting, and wildlife viewing in Ohio. This is also sometimes called the total multiplier effect.

ECONOMIC IMPACT ANALYSIS METHODS

This section first details the sources used in the analysis before discussing the modelling itself.

Sources for the Participation Inputs

The number of participants and days of activity were developed based on the surveys described previously. The survey data were used to estimate the number of hunters, anglers, sport shooters, and wildlife viewers who participated in 2022, plus annual days of activity.

The general population survey was the primary source for reaching sport shooters and wildlife viewers, considering licenses are not required for these activities. In addition, because many Ohio residents are not required to purchase a license to hunt or fish, such as landowners, youth under 18, and active military personnel, the general population sample was used to quantify the percent of resident hunters and anglers who participated without a license. These numbers are a critical component of the economic analysis, which used these data to multiply the number of participants by the average annual spending per participant. Average spending for sport shooters and wildlife viewers was determined using data from the general population survey, while the licensed hunter and angler surveys collected data on their spending.

The surveys inquired about respondents' district of residence and districts where they participated. The Division's wildlife management districts were then used in the analysis.

It was not feasible in this project to identify and contact nonresidents; therefore, they were not surveyed. Nonresident hunting and fishing participation was determined by applying a ratio of resident-to-nonresident licenses sold by the Division to the estimated number of Ohio hunters and anglers, described above. This calculation showed that 14% of both hunting and fishing licenses are purchased by nonresidents, based on the American Sportfishing Association's License Dashboard. This service was built using summarized license sales data provided by the Division for 2021, the latest year available (the dashboard is available at <https://asafishing.org/data-dashboard/>). Participation and economic contribution estimates were not developed for nonresident sport shooters. To the extent the contributions occur, and they certainly exist, this report underestimates the actual economic returns to Ohio from the examined activities. Finally, the number and total spending for nonresident wildlife viewers were developed by taking a ratio of the number of resident to nonresident viewers in Ohio from the 2006 and 2011 *National Surveys of Fishing, Hunting, and Wildlife-Associated Recreation* and applying that to the 2022 resident participation and spending estimates developed in this project's surveys.

Spending Definitions and Analyses

Expenditures are defined as the retail spending made by hunters, anglers, sport shooters, and wildlife viewers to directly support their participation in a given activity. Travel and durable good expenditures for all groups were obtained in the surveys. Respondents were asked to only report expenditures specific to the activities in question, including trips taken for the specific purpose of these outdoor activities or if taken as part of multi-purpose trips. For travel-related spending, respondents were asked to report expenses made for a typical trip in 2022. For equipment spending, respondents were asked to only report equipment purchased for the primary purpose of each activity in 2022. Trip spending was allocated 100% to the district

where participants said they primarily hunted, fished, sport shot, or viewed wildlife, allowing the resulting economic impacts to reasonably reflect where activity occurred versus improperly assigning all dollars spent to respondents' home districts.

Equipment spending was assigned to respondents' district of residence. This assumption that equipment purchases are made close to home is based on previous analyses of the 2006 and 2011 U.S. Fish and Wildlife Services' *National Surveys of Fishing, Hunting, and Wildlife Associated Recreation* that show only 7%, 1%, and 2% of equipment purchases made by nonresident hunters, anglers, and wildlife viewers, respectively, in Ohio were made away from home. Similar data were not available for target shooters.

For nonresidents, given the purpose of the project is to report the economic contributions created by spending that occurred within Ohio, and considering a majority of equipment used by nonresidents was purchased out of state, only nonresidents' travel spending is included in this report. These expenditures were assigned to the district where they reported participating in each engaged activity. The average spent per trip by nonresident hunters and anglers was assumed to mirror residents' spending, which likely underestimates the actual amounts but provided defensible estimates, given nonresidents' likely greater use of lodging, restaurants, and other travel services.

Statewide spending estimates are provided along with district estimates. The statewide spending was calculated separately versus summing across the districts. As a result, the sum of district spending may not equal the statewide total due to rounding. Any differences are roughly 1% and, therefore, inconsequential.

Economic Modeling

The estimated 2022 economic contributions associated with hunting, fishing, sport shooting, and wildlife viewing in Ohio were generated using the input-output modeling software, IMPLAN. The IMPLAN model, which measures direct, indirect, and induced effects, was developed originally for use by the U.S. Forest Service. IMPLAN models explain the relationship between the dollars received by a specific economic sector and that sector's output (i.e., jobs, income, and taxes generated). For example, the models explain how the dollars spent by anglers for lures are spent and re-spent by retailers, wholesalers, manufacturers, and suppliers as well as the number of jobs, amount of tax revenues, and value of other benefits created along the way. The sum of all these transactions is the total economic contributions provided in this report.

Only economic activity that occurred *within* the state is considered in this analysis. The results do not include any spending or economic activity that occurred outside of Ohio. The proportion of spending and activity that accrue to other states and nations are excluded from the final results. Along the same line, the multipliers experienced at the district levels are less than they are at the statewide level. Dollars exchange hands fewer times within a substate district than they do at the statewide level. Dollars may leave the district but still remain within the state economy. With fewer exchanges comes lower multipliers. For example, while a dollar spent by a hunter within District 1 might generate \$1.20 in economic activity, the multiplier at the state level, where it has more opportunities to exchange hands, could be \$1.50.

The total taxes estimated by the IMPLAN model include all income, sales, property, and other taxes and fees that accrue to the various local, state, and federal taxing authorities.

ECONOMIC IMPACTS OF HUNTING, FISHING, SPORT SHOOTING, AND WILDLIFE VIEWING IN OHIO

The following section describes participation in hunting, fishing, sport shooting, and wildlife viewing in Ohio during 2022 and the resulting economic contributions of these activities. Residency breakouts are also provided, when available. For target shooting, details are provided by type of firearm used, as well.

Participation

There were roughly 530,000 hunters, 1.7 million anglers, 1.1 million sport shooters, and 4.1 million wildlife viewers who participated in their given activity in 2022 within Ohio, as shown in the following table. Total participants is not the sum of the above because people may participate in more than one activity.

Number of Participants				
<i>Numbers</i>	Hunting	Fishing	Sport Shooting	Wildlife Viewing
Residents	486,087	1,590,240	1,071,592	3,859,547
Nonresidents	45,391	141,150	NA	270,424
Total	531,478	1,731,390	1,071,592	4,129,971

Spending

Participants incur travel-related, equipment, and other expenses to participate in their activities. Trip-related items are similar across all types of activities and can include fuel, food, and lodging. The types of equipment purchases are specific to the type of activity. Hunters purchase items such as firearms, apparel, and other accessories, while anglers purchase items such as rods, reels, lines, and lures. The estimates of participant expenditures are presented in the following Table. Details showing estimated spending for specific products and services, plus average spending per participant, are presented in Appendix A.

Total Annual Statewide Spending	
	Dollar Amount Spent
Hunting	\$1,865,067,078
Resident spending	\$1,765,298,095
Nonresident spending	\$99,487,563
Fishing	\$5,489,108,950
Resident spending	\$5,320,011,254
Nonresident spending	\$169,097,696
Sport shooting (residents only)	\$2,616,397,644
Wildlife viewing	\$1,586,737,915
Resident spending	\$1,534,861,740
Nonresident spending	\$51,876,175
Total	\$11,557,311,587

Total Economic Contributions

The expenditures made by hunters, anglers, sport shooters, and wildlife viewers cycle through the district and state economies to generate additional rounds of spending by businesses that provide supporting services and goods to these recreation activities. These rounds of spending are referred to as the multiplier effect, or total output.

The following table shows the total economic contributions resulting from the direct and multiplier effects of spending associated with hunting, fishing, sport shooting, and wildlife viewing in Ohio. Altogether, the activities contributed \$6.7 billion to Ohio's GDP in 2022, and were responsible for \$12.5 billion in total economic activity, or the total value of the rounds of spending as participants' dollars moved through the state economy.

Statewide Economic Contributions by Activity						
Activity	Jobs	Labor Income	State GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	12,100	\$591,189,900	\$1,068,255,301	\$171,083,962	\$92,105,972	\$2,023,777,453
Fishing	34,094	\$1,844,898,835	\$3,030,197,492	\$515,410,719	\$281,752,039	\$5,717,384,459
Sport Shooting	22,278	\$1,006,628,480	\$1,647,680,563	\$267,763,713	\$156,021,695	\$3,060,126,469
Wildlife Viewing	11,574	\$541,990,867	\$908,734,586	\$133,020,921	\$87,746,349	\$1,666,053,795
Total	80,046	\$3,984,708,082	\$6,654,867,942	\$1,087,279,315	\$617,626,055	\$12,467,342,176

Economic Contributions of Residents

The next table breaks out the total economic contributions attributable to resident participants. In total, in 2022 resident hunting, fishing, sport shooting, and wildlife viewing activities generated \$12.0 billion of economic activity for Ohio. These activities supported over 77,000 jobs, paying roughly \$3.8 billion in salaries and wages and generating more than \$1.0 billion in state and local tax revenue.

Statewide Economic Contributions of Residents by Activity						
Activity	Jobs	Salaries and Wages	GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	11,330	\$549,814,588	\$995,646,143	\$161,253,025	\$85,206,095	\$1,882,685,396
Fishing	32,513	\$1,770,685,323	\$2,903,522,832	\$493,555,838	\$270,519,508	\$5,480,650,834
Sport Shooting	22,278	\$1,006,628,480	\$1,647,680,563	\$267,763,713	\$156,021,695	\$3,060,126,469
Wildlife Viewing	11,057	\$518,778,098	\$869,719,241	\$127,068,753	\$84,036,994	\$1,592,965,808
Total	77,178	\$3,845,906,489	\$6,416,568,779	\$1,049,641,329	\$595,784,292	\$12,016,428,507

Economic Contributions of Nonresidents

As the table below shows, nonresidents generated approximately \$450 million in economic activity in 2022. These activities supported almost 2,900 jobs, paying \$139 million in salaries and wages and generating \$38 million in state and local tax revenue.

Statewide Economic Contributions of Nonresidents by Activity						
Activity	Jobs	Salaries and Wages	GDP	State and Local Taxes	Federal Taxes	Total Output
Hunting	770	\$41,375,312	\$72,609,158	\$9,830,937	\$6,899,877	\$141,092,056
Fishing	1,581	\$74,213,512	\$126,674,660	\$21,854,881	\$11,232,531	\$236,733,625
Sport Shooting	NA	NA	NA	NA	NA	NA
Wildlife Viewing	517	\$23,212,768	\$39,015,345	\$5,952,168	\$3,709,354	\$73,087,987
Total	2,868	\$138,801,592	\$238,299,163	\$37,637,986	\$21,841,762	\$450,913,668

Economic Contributions by District

The following table provides total participants' spending for each of the Division's management districts. This is followed on the next page by tables for the contributions generated for each district. District 3 has the greatest overall impacts, primarily driven by where spending occurs and population, although all districts are substantial contributors.

Participants' Spending by Activity					
Expenditures	Hunting	Fishing	Sport Shooting	Wildlife Viewing	Total
District 1	\$243,207,506	\$1,040,856,456	\$636,298,250	\$284,945,705	\$2,152,948,136
District 2	\$218,812,411	\$956,461,808	\$373,250,280	\$199,208,391	\$1,724,380,284
District 3	\$651,555,368	\$1,684,454,898	\$821,860,090	\$547,278,560	\$3,633,088,577
District 4	\$418,175,995	\$535,368,425	\$385,542,027	\$159,135,629	\$1,485,472,036
District 5	\$329,975,500	\$1,266,505,739	\$447,798,008	\$402,964,801	\$2,401,478,804

Economic Contributions by Activity, District 1						
Activity	Jobs	Labor Income	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
Hunting	1,217	\$60,024,254	\$110,710,454	\$18,446,652	\$8,455,173	\$197,872,405
Fishing	4,523	\$263,002,825	\$423,226,686	\$81,962,175	\$44,751,348	\$759,343,904
Sport Shooting	5,230	\$238,831,396	\$380,504,248	\$59,755,245	\$34,826,805	\$668,088,354
Wildlife Viewing	1,923	\$91,855,027	\$153,567,631	\$21,616,012	\$14,056,511	\$269,957,501
Total	12,893	\$653,713,502	\$1,068,009,019	\$181,780,084	\$133,678,326	\$1,895,262,164

Economic Contributions by Activity, District 2						
Activity	Jobs	Labor Income	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
Hunting	1,265	\$52,469,888	\$97,144,636	\$14,775,545	\$8,592,246	\$196,979,626
Fishing	5,655	\$259,617,731	\$416,459,592	\$76,486,937	\$41,761,868	\$830,633,341
Sport Shooting	3,469	\$144,120,073	\$229,278,948	\$32,708,603	\$23,997,503	\$445,493,241
Wildlife Viewing	1,206	\$48,579,425	\$80,472,908	\$12,291,727	\$7,934,194	\$159,758,433
Total	11,595	\$504,787,117	\$823,356,084	\$136,262,812	\$121,526,494	\$1,632,864,640

Economic Contributions by Activity, District 3						
Activity	Jobs	Labor Income	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
Hunting	4,138	\$197,899,760	\$355,452,238	\$59,158,187	\$30,893,408	\$668,344,514
Fishing	9,556	\$518,923,227	\$820,101,447	\$153,117,755	\$83,602,294	\$1,520,318,473
Sport Shooting	6,651	\$295,402,130	\$474,069,214	\$75,101,376	\$47,207,988	\$878,008,202
Wildlife Viewing	4,037	\$188,833,654	\$315,330,240	\$46,093,404	\$31,150,980	\$575,013,078
Total	24,382	\$1,201,058,771	\$1,964,953,139	\$333,470,722	\$271,367,092	\$3,641,684,267

Economic Contributions by Activity, District 4						
Activity	Jobs	Labor Income	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
Hunting	2,205	\$76,866,251	\$145,478,673	\$31,218,974	\$10,987,721	\$279,297,878
Fishing	2,425	\$95,754,550	\$165,907,993	\$37,658,646	\$20,561,621	\$312,184,517
Sport Shooting	2,334	\$77,136,171	\$129,228,636	\$32,069,713	\$10,153,229	\$244,611,487
Wildlife Viewing	968	\$33,277,183	\$56,512,620	\$10,446,823	\$5,222,406	\$106,525,671
Total	7,932	\$283,034,155	\$497,127,922	\$111,394,156	\$55,910,473	\$942,619,553

Economic Contributions by Activity, District 5						
Activity	Jobs	Labor Income	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
Hunting	2,150	\$103,794,984	\$184,075,324	\$30,614,946	\$15,350,924	\$324,952,105
Fishing	6,991	\$370,047,860	\$585,715,764	\$116,848,769	\$63,799,428	\$1,010,946,165
Sport Shooting	3,693	\$167,411,460	\$265,906,100	\$44,996,032	\$24,752,000	\$467,860,128
Wildlife Viewing	2,818	\$133,702,601	\$219,312,465	\$32,361,536	\$20,881,949	\$387,710,037
Total	15,652	\$774,956,905	\$1,255,009,653	\$224,821,283	\$169,342,104	\$2,191,468,435

COMPARISON AND DISCUSSION OF THE ECONOMIC ANALYSES

The economic contributions generated by hunting, fishing, sport shooting, and wildlife viewing are a powerful economic engine for communities across Ohio, generating retail sales, jobs, and incentives to conserve fish and wildlife, open spaces, and recreational opportunities. Examples of how participants in these outdoor activities compare to the populations of major Ohio cities (based on U.S. Census data) include:

- The number of hunters in Ohio (531,478) is 1.7 times greater than the population of Cincinnati (309,513).
- Anglers (1,731,389) nearly outnumber the population of Columbus (907,971) by 2 to 1.
- For every resident of Akron (188,509), there are six sport shooters in Ohio.
- Wildlife viewers are 11.5 times greater in numbers than the population of Cleveland (361,607). Roughly 1 out of 3 Ohio residents will take time to view wildlife at least once annually.

In addition, hunting, fishing, target shooting, and wildlife viewing compares favorably to Ohio's Fortune 500 members. For example:

- Together, these four activities support 4.5 times more jobs within Ohio than the number of people employed by Marathon Petroleum nationally. The four activities' employment is roughly equal to Goodyear Tire & Rubber's U.S. employees (Fortune 500).
- The total jobs supported in Ohio by sportfishing alone are equivalent to the total employees of Avery Dennison (Fortune 500).
- The total yearly spending within the state for hunting, fishing, target shooting, and wildlife viewing is 1.2 times more than the annual revenues of Owens Corning or Fifth Third Bancorp (Fortune 500).
- Total spending by Ohio's hunters in 2022 equaled 25% of J.M. Smucker's annual revenues (Fortune 500).

If Ohio residents and visitors no longer participated in hunting, fishing, sport shooting, or wildlife viewing in Ohio and did not spend their dollars otherwise, the state economy would be expected to contract by the estimated economic contributions provided in this report. Considering that participants would shift to lesser preferred activities, which by nature would provide users with lower levels of satisfaction, they would likely spend less than they do for the higher-valued activities presented here. Some would travel to neighboring states, taking their dollars and associated economic benefits with them.

Note that the full economic importance of hunting, fishing, sport shooting, and wildlife viewing to Ohio residents is greater than their contributions to statewide commerce. The true value to individuals from outdoor recreation is not fully reflected by the dollars spent but by the satisfaction or intrinsic worth individuals receive from a day of participation. The total value one receives is greater than the amount spent or else the individual would not participate. If the net value of a day outdoors becomes negative, then the individual will cease participation. The economic measures reported in this document are meant to explain how people's recreational time supports commerce and industries in Ohio and are not meant to be the absolute measure of the full economic value generated by these outdoor activities to state residents and visitors.

APPENDIX A: SPENDING BY PRODUCT AND SERVICE CATEGORY

The following tables detail the spending by anglers, hunters, sport shooters, and wildlife viewers in Ohio in 2022 for the specific products and services tracked in the project's surveys.

Spending on Hunting, Residents and Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$210,558,315
Restaurants, bars, and take-out food purchases	\$135,611,509
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$68,895,409
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$450,276,627
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$30,509,717
Guide fees, pack trip, or package fees	\$21,911,195
Equipment rental	\$13,047,363
Heating and cooking fuel	\$21,789,603
Souvenirs, gifts, other miscellaneous	\$17,546,726
<i>Trip Spending Total</i>	<i>\$970,146,464</i>
Equipment Spending	
Firearms (rifles, shotguns, handguns)	\$124,087,410
Bows, arrows, archery, equipment	\$58,659,477
Ammunition	\$48,952,283
Telescopic sights	\$23,593,813
Decoys or game calls	\$9,318,898
Stands	\$41,164,251
Trail or game cameras	\$35,849,392
Game feed and feeders	\$35,141,099
Hunting dogs and associated costs	\$41,749,201
Other hunting equipment	\$31,093,102
<i>Equipment Total</i>	
Knives or multi-tools	\$9,144,143
Camping equipment	\$11,502,478
Binoculars, field glasses, telescopes, etc.	\$15,662,447
Clothing and footwear for hunting	\$61,026,136
Animal processing and taxidermy	\$61,001,281
<i>Auxiliary Equipment Total</i>	<i>\$158,336,484</i>
Cabins	\$10,857,400
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$90,435,884
Boats (motorized or non-motorized), boat trailers, boat motors	\$35,621,861
<i>Special Equipment Total</i>	<i>\$136,915,145</i>
Licenses, stamps, tags, and permits	\$47,499,136
Magazines, books, DVDs, phone apps, other information technology	\$5,911,474
Membership dues and contributions	\$8,471,163
Land leasing and ownership	\$88,178,286
<i>Other Expenses Total</i>	<i>\$150,060,059</i>
<i>Equipment Spending Total</i>	<i>\$894,920,614</i>
<i>Total Annual Resident + Nonresident Hunter Spending</i>	<i>\$1,865,067,078</i>

Spending on Hunting, Residents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$192,575,605
Restaurants, bars, and take-out food purchases	\$124,029,622
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$63,011,404
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$411,820,800
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$27,904,038
Guide fees, pack trip, or package fees	\$20,039,872
Equipment rental	\$11,933,055
Heating and cooking fuel	\$19,928,664
Souvenirs, gifts, other miscellaneous	\$16,048,150
Trip Spending Total	\$887,291,211
Equipment Spending	
Firearms (rifles, shotguns, handguns)	\$124,087,410
Bows, arrows, archery, equipment	\$58,659,477
Ammunition	\$48,952,283
Telescopic sights	\$23,593,813
Decoys or game calls	\$9,318,898
Stands	\$41,164,251
Trail or game cameras	\$35,849,392
Game feed and feeders	\$35,141,099
Hunting dogs and associated costs	\$41,749,201
Other hunting equipment	\$31,093,102
Equipment Total	\$449,608,926
Knives or multi-tools	\$9,144,143
Camping equipment	\$11,502,478
Binoculars, field glasses, telescopes, etc.	\$15,662,447
Clothing and footwear for hunting	\$61,026,136
Animal processing and taxidermy	\$61,001,281
Auxiliary Equipment Total	\$158,336,484
Cabins	\$10,857,400
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$90,435,884
Boats (motorized or non-motorized), boat trailers, boat motors	\$35,621,861
Special Equipment Total	\$136,915,145
Licenses, stamps, tags, and permits	\$30,585,406
Magazines, books, DVDs, phone apps, other information technology	\$5,911,474
Membership dues and contributions	\$8,471,163
Land leasing and ownership	\$88,178,286
Other Expenses Total	\$133,146,329
Equipment Spending Total	\$878,006,885
Total Annual Resident Hunter Spending	\$1,765,298,095

Only travel expenses are considered for nonresidents, as most bring their equipment with them, as explained within the methods at the start of this section.

Spending on Hunting, Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$17,982,710
Restaurants, bars, and take-out food purchases	\$11,581,886
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$5,884,005
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$38,455,826
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$2,605,679
Guide fees, pack trip, or package fees	\$1,871,323
Equipment rental	\$1,114,309
Heating and cooking fuel	\$1,860,939
Souvenirs, gifts, other miscellaneous	\$1,498,576
Trip Spending Total	\$82,855,253

The following page shows spending per hunter. The trip expenditures are per resident and nonresident hunters together. The equipment expenditures are among residents only.

Per Hunter Spending on Hunting, Residents and Nonresidents	
Trip Spending	Mean Amount Spent per Hunter
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$20.37
Restaurants, bars, and take-out food purchases	\$13.12
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$6.67
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$43.57
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$2.95
Guide fees, pack trip, or package fees	\$2.12
Equipment rental	\$1.26
Heating and cooking fuel	\$2.11
Souvenirs, gifts, other miscellaneous	\$1.70
<i>Trip Spending Total</i>	\$93.87
Equipment Spending	
Firearms (rifles, shotguns, handguns)	\$255.28
Bows, arrows, archery, equipment	\$120.68
Ammunition	\$100.71
Telescopic sights	\$48.54
Decoys or game calls	\$19.17
Stands	\$84.68
Trail or game cameras	\$73.75
Game feed and feeders	\$72.29
Hunting dogs and associated costs	\$85.89
Other hunting equipment	\$63.97
<i>Equipment Total</i>	\$924.96
Knives or multi-tools	\$18.81
Camping equipment	\$23.66
Binoculars, field glasses, telescopes, etc.	\$32.22
Clothing and footwear for hunting	\$125.55
Animal processing and taxidermy	\$125.49
<i>Auxiliary Equipment Total</i>	\$325.74
Cabins	\$22.34
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$186.05
Boats (motorized or non-motorized), boat trailers, boat motors	\$73.28
<i>Special Equipment Total</i>	\$281.67
Licenses, stamps, tags, and permits	\$62.92
Magazines, books, DVDs, phone apps, other information technology	\$12.16
Membership dues and contributions	\$17.43
Land leasing and ownership	\$181.40
<i>Other Expenses Total</i>	\$273.91
<i>Equipment Spending Total</i>	\$1,806.28

Spending on Fishing, Residents and Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$416,259,652
Restaurants, bars, and take-out food purchases	\$239,765,862
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$396,242,018
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$709,980,709
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$23,541,091
Guide fees, pack trip, or package fees	\$117,402,401
Equipment rental	\$82,969,832
Heating and cooking fuel	\$43,468,037
Souvenirs, gifts, other miscellaneous	\$44,579,587
<i>Trip Spending Total</i>	<i>\$2,074,209,188</i>
Equipment Spending	
Rods, reels, poles, and rod-making components	\$166,119,538
Lines and leaders	\$49,652,840
Lures, bait, and bait containers	\$111,467,157
Hooks, sinkers, other items attached to lines	\$34,621,034
Fish finders and other electronic fish devices	\$180,711,545
Tackle boxes and other fishing item storage	\$24,248,983
Creels, fish bags, hooks, landing nets	\$16,875,334
Ice fishing equipment	\$13,926,914
Other fishing equipment	\$29,139,602
<i>Equipment Total</i>	<i>\$626,762,946</i>
Camping equipment	\$66,616,461
Binoculars, field glasses, telescopes, etc.	\$24,134,754
Clothing and footwear for hunting	\$73,059,019
Animal processing and taxidermy	\$13,304,943
<i>Auxiliary Equipment Total</i>	<i>\$177,115,177</i>
Cabins	\$43,575,499
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$1,559,895,985
Boats (motorized or non-motorized), boat trailers, boat motors	\$856,089,666
Ice houses	\$2,920,569
Sleds	\$1,389,652
<i>Special Equipment Total</i>	<i>\$2,463,871,371</i>
Licenses, stamps, tags, and permits	\$37,405,529
Magazines, books, DVDs, phone apps, other information technology	\$5,600,153
Membership dues and contributions	\$16,148,477
Land leasing and ownership	\$87,996,108
<i>Other Expenses Total</i>	<i>\$147,150,268</i>
<i>Equipment Spending Total</i>	<i>\$3,414,899,761</i>
<i>Total Annual Resident + Nonresident Angler Spending</i>	<i>\$5,489,108,950</i>

Spending on Fishing, Residents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$382,324,527
Restaurants, bars, and take-out food purchases	\$220,219,205
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$363,938,809
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$652,100,288
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$21,621,929
Guide fees, pack trip, or package fees	\$107,831,295
Equipment rental	\$76,205,805
Heating and cooking fuel	\$39,924,351
Souvenirs, gifts, other miscellaneous	\$40,945,284
<i>Trip Spending Total</i>	<i>\$1,905,111,492</i>
Equipment Spending	
Rods, reels, poles, and rod-making components	\$166,119,538
Lines and leaders	\$49,652,840
Lures, bait, and bait containers	\$111,467,157
Hooks, sinkers, other items attached to lines	\$34,621,034
Fish finders and other electronic fish devices	\$180,711,545
Tackle boxes and other fishing item storage	\$24,248,983
Creels, fish bags, hooks, landing nets	\$16,875,334
Ice fishing equipment	\$13,926,914
Other fishing equipment	\$29,139,602
<i>Equipment Total</i>	<i>\$626,762,946</i>
Camping equipment	\$66,616,461
Binoculars, field glasses, telescopes, etc.	\$24,134,754
Clothing and footwear for hunting	\$73,059,019
Animal processing and taxidermy	\$13,304,943
<i>Auxiliary Equipment Total</i>	<i>\$177,115,177</i>
Cabins	\$43,575,499
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$1,559,895,985
Boats (motorized or non-motorized), boat trailers, boat motors	\$856,089,666
Ice houses	\$2,920,569
Sleds	\$1,389,652
<i>Special Equipment Total</i>	<i>\$2,463,871,371</i>
Licenses, stamps, tags, and permits	\$37,405,529
Magazines, books, DVDs, phone apps, other information technology	\$5,600,153
Membership dues and contributions	\$16,148,477
Land leasing and ownership	\$87,996,108
<i>Other Expenses Total</i>	<i>\$147,150,268</i>
<i>Equipment Spending Total</i>	<i>\$3,414,899,761</i>
<i>Total Annual Resident Angler Spending</i>	<i>\$5,320,011,254</i>

Spending on Fishing, Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$33,935,125
Restaurants, bars, and take-out food purchases	\$19,546,657
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$32,303,209
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$57,880,422
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$1,919,162
Guide fees, pack trip, or package fees	\$9,571,106
Equipment rental	\$6,764,027
Heating and cooking fuel	\$3,543,685
Souvenirs, gifts, other miscellaneous	\$3,634,303
Trip Spending Total	\$169,097,696

The following page shows spending per angler. The trip expenditures are per resident and nonresident anglers together. The equipment expenditures are among residents only.

Per Angler Spending on Fishing, Residents and Nonresidents	
Trip Spending	Mean Amount Spent per Angler
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$11.17
Restaurants, bars, and take-out food purchases	\$6.43
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$10.63
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$19.05
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$0.63
Guide fees, pack trip, or package fees	\$3.15
Equipment rental	\$2.23
Heating and cooking fuel	\$1.17
Souvenirs, gifts, other miscellaneous	\$1.20
<i>Trip Spending Total</i>	\$55.65
Equipment Spending	
Rods, reels, poles, and rod-making components	\$4.85
Lines and leaders	\$1.45
Lures, bait, and bait containers	\$3.26
Hooks, sinkers, other items attached to lines	\$1.01
Fish finders and other electronic fish devices	\$5.28
Tackle boxes and other fishing item storage	\$0.71
Creels, fish bags, hooks, landing nets	\$0.49
Ice fishing equipment	\$0.41
Other fishing equipment	\$0.85
<i>Equipment Total</i>	\$18.31
Camping equipment	\$1.95
Binoculars, field glasses, telescopes, etc.	\$0.70
Clothing and footwear for hunting	\$2.13
Animal processing and taxidermy	\$0.39
<i>Auxiliary Equipment Total</i>	\$5.17
Cabins	\$1.27
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$45.57
Boats (motorized or non-motorized), boat trailers, boat motors	\$25.01
Ice houses	\$0.09
Sleds	\$0.04
<i>Special Equipment Total</i>	\$71.97
Licenses, stamps, tags, and permits	\$1.09
Magazines, books, DVDs, phone apps, other information technology	\$0.16
Membership dues and contributions	\$0.47
Land leasing and ownership	\$2.57
<i>Other Expenses Total</i>	\$4.30
<i>Equipment Spending Total</i>	\$99.75

Spending on Sport Shooting, Residents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$215,832,677
Restaurants, bars, and take-out food purchases	\$236,416,070
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$240,474,099
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$437,722,545
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$44,394,006
Guide fees, pack trip, or package fees	\$129,121,443
Equipment rental	\$30,219,101
Heating and cooking fuel	\$24,643,212
Souvenirs, gifts, other miscellaneous	\$106,994,612
<i>Trip Spending Total</i>	<i>\$1,465,817,765</i>
Equipment Spending	
Rifles	\$156,896,168
Shotguns	\$96,286,044
Handguns	\$17,798,576
Other	\$11,563,161
<i>Firearms Total</i>	<i>\$282,543,949</i>
Rifle ammunition	\$101,881,452
Shotgun ammunition	\$56,077,068
Handgun ammunition	\$113,652,135
Other ammunition	\$10,754,009
<i>Ammunition Total</i>	<i>\$282,364,664</i>
Telescopic sights or optics	\$60,180,699
Safety equipment (shooting glasses, ear protection, etc.)	\$38,447,444
Clays or targets	\$34,710,375
Shooting bench, rest or stick	\$17,831,544
Holsters or cases	\$34,543,803
Other target shooting equipment	\$16,747,602
<i>Shooting Equipment Total</i>	<i>\$202,461,466</i>
Clothing and footwear for target shooting	\$37,962,840
Concealed Carry Weapons Permit classes	\$40,376,697
Magazines, books, DVDs, phone apps, other information technology	\$17,332,353
Membership dues and contributions	\$22,429,288
Land leasing and ownership	\$20,404,436
<i>Auxiliary Equipment Total</i>	<i>\$138,505,613</i>
Cabins	\$86,633,531
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$74,716,522
Boats (motorized or non-motorized), boat trailers, boat motors	\$83,354,135
<i>Special Equipment Total</i>	<i>\$244,704,188</i>
<i>Equipment Spending Total</i>	<i>\$1,150,579,880</i>
<i>Total Annual Resident Sport Shooter Spending</i>	<i>\$2,616,397,644</i>

Per Sport Shooter Spending on Sport Shooting, Residents	
Trip Spending	Mean Amount Spent per Sport Shooter
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$15.52
Restaurants, bars, and take-out food purchases	\$17.00
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$17.29
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$31.48
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$3.19
Guide fees, pack trip, or package fees	\$9.29
Equipment rental	\$2.17
Heating and cooking fuel	\$1.77
Souvenirs, gifts, other miscellaneous	\$7.69
<i>Trip Spending Total</i>	<i>\$105.42</i>
Equipment Spending	
Rifles	\$146.41
Shotguns	\$89.85
Handguns	\$16.61
Other	\$10.79
<i>Firearms Total</i>	<i>\$263.67</i>
Rifle ammunition	\$95.07
Shotgun ammunition	\$52.33
Handgun ammunition	\$106.06
Other ammunition	\$10.04
<i>Ammunition Total</i>	<i>\$263.50</i>
Telescopic sights or optics	\$56.16
Safety equipment (shooting glasses, ear protection, etc.)	\$35.88
Clays or targets	\$32.39
Shooting bench, rest or stick	\$16.64
Holsters or cases	\$32.24
Other target shooting equipment	\$15.63
<i>Shooting Equipment Total</i>	<i>\$188.94</i>
Clothing and footwear for target shooting	\$35.43
Concealed Carry Weapons Permit classes	\$37.68
Magazines, books, DVDs, phone apps, other information technology	\$16.17
Membership dues and contributions	\$20.93
Land leasing and ownership	\$19.04
<i>Auxiliary Equipment Total</i>	<i>\$129.25</i>
Cabins	\$80.85
Motorized vehicles (pickups, 4x4s, ATVs, snowmobiles, RVs, etc.)	\$69.72
Boats (motorized or non-motorized), boat trailers, boat motors	\$77.79
<i>Special Equipment Total</i>	<i>\$228.36</i>
<i>Equipment Spending Total</i>	<i>\$1,073.71</i>

Spending on Wildlife Viewing, Residents and Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$103,949,077
Restaurants, bars, and take-out food purchases	\$87,972,334
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$95,889,776
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$130,857,143
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$19,481,936
Guide fees, pack trip, or package fees	\$11,329,705
Equipment rental	\$5,379,218
Heating and cooking fuel	\$11,416,913
Souvenirs, gifts, other miscellaneous	\$33,316,985
<i>Trip Spending Total</i>	<i>\$499,593,086</i>
Equipment Spending	
Binoculars, field glasses, telescopes, etc.	\$94,920,355
Cameras and accessories	\$181,037,384
Pack-baskets, packs, and pouches	\$61,379,571
Animal feed	\$130,488,229
Clothing and footwear	\$210,257,737
<i>Equipment Total</i>	<i>\$678,083,276</i>
Camping equipment (tents, backpacks, etc.)	\$188,251,212
Magazines, books, field guides, DVDs, apps, other information technology, etc.	\$30,758,839
Membership dues, entrance fees, and contributions	\$85,188,759
Plantings for improving or maintaining habitat	\$104,862,743
<i>Other Expenses Total</i>	<i>\$409,061,553</i>
<i>Equipment Spending Total</i>	<i>\$1,087,144,829</i>
<i>Total Annual Resident + Nonresident Spending</i>	<i>\$1,586,737,915</i>

Spending on Wildlife Viewing, Residents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$93,155,332
Restaurants, bars, and take-out food purchases	\$78,837,563
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$85,932,883
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$117,269,349
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$17,458,993
Guide fees, pack trip, or package fees	\$10,153,264
Equipment rental	\$4,820,657
Heating and cooking fuel	\$10,231,417
Souvenirs, gifts, other miscellaneous	\$29,857,454
<i>Trip Spending Total</i>	<i>\$447,716,911</i>
Equipment Spending	
Binoculars, field glasses, telescopes, etc.	\$94,920,355
Cameras and accessories	\$181,037,384
Pack-baskets, packs, and pouches	\$61,379,571
Animal feed	\$130,488,229
Clothing and footwear	\$210,257,737
<i>Equipment Total</i>	<i>\$678,083,276</i>
Camping equipment (tents, backpacks, etc.)	\$188,251,212
Magazines, books, field guides, DVDs, apps, other information technology, etc.	\$30,758,839
Membership dues, entrance fees, and contributions	\$85,188,759
Plantings for improving or maintaining habitat	\$104,862,743
<i>Other Expenses Total</i>	<i>\$409,061,553</i>
<i>Equipment Spending Total</i>	<i>\$1,087,144,829</i>
<i>Total Annual Resident Wildlife Viewer Spending</i>	<i>\$1,534,861,740</i>

Spending on Wildlife Viewing, Nonresidents	
Trip Spending	Amount Spent
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$10,793,745
Restaurants, bars, and take-out food purchases	\$9,134,771
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$9,956,893
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$13,587,794
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$2,022,943
Guide fees, pack trip, or package fees	\$1,176,441
Equipment rental	\$558,561
Heating and cooking fuel	\$1,185,496
Souvenirs, gifts, other miscellaneous	\$3,459,531
Trip Spending Total	\$51,876,175

Per Viewer Spending on Wildlife Viewing, Residents	
Trip Spending	Mean Amount Spent per Wildlife Viewer
Groceries, food, liquor bought in stores (not in restaurants and bars)	\$25.17
Restaurants, bars, and take-out food purchases	\$21.30
Overnight accommodations (hotels/motels, campgrounds, cabin rental, etc.)	\$23.22
Fuel for your car, truck, boat, airplane, ATV, and other transportation	\$31.68
Transportation services (air transport, taxi, boat ferries, shuttle vans, etc.)	\$4.72
Guide fees, pack trip, or package fees	\$2.74
Equipment rental	\$1.30
Heating and cooking fuel	\$2.76
Souvenirs, gifts, other miscellaneous	\$8.07
Trip Spending Total	\$120.97
Equipment Spending	
Binoculars, field glasses, telescopes, etc.	\$22.98
Cameras and accessories	\$43.84
Pack-baskets, packs, and pouches	\$14.86
Animal feed	\$31.60
Clothing and footwear	\$50.91
Equipment Total	\$164.19
Camping equipment (tents, backpacks, etc.)	\$45.58
Magazines, books, field guides, DVDs, apps, other information technology, etc.	\$7.45
Membership dues, entrance fees, and contributions	\$20.63
Plantings for improving or maintaining habitat	\$25.39
Other Expenses Total	\$99.05
Equipment Spending Total	\$263.23

APPENDIX B: DETAILED RESULTS BY ACTIVITY, DISTRICT, AND RESIDENCY

The following tables detail the spending and economic contributions by hunters, anglers, sport shooters, and wildlife viewers in Ohio in 2022 for each district and in total.

HUNTER TABLES

Spending and Economic Contributions, Resident and Nonresident Hunters					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	65,665	\$243,207,506	\$3,704	1,217	\$60,024,254
2	70,761	\$218,812,411	\$3,092	1,265	\$52,469,888
3	152,075	\$651,555,368	\$4,284	4,138	\$197,899,760
4	144,613	\$418,175,995	\$2,892	2,205	\$76,866,251
5	98,363	\$329,975,500	\$3,355	2,150	\$103,794,984
Statewide	531,478	\$1,865,067,078	\$3,509	12,100	\$591,189,900

Spending and Economic Contributions, Resident and Nonresident Hunters				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$110,710,454	\$18,446,652	\$8,455,173	\$197,872,405
2	\$97,144,636	\$14,775,545	\$8,592,246	\$196,979,626
3	\$355,452,238	\$59,158,187	\$30,893,408	\$668,344,514
4	\$145,478,673	\$31,218,974	\$10,987,721	\$279,297,878
5	\$184,075,324	\$30,614,946	\$15,350,924	\$324,952,105
Statewide	\$1,068,255,301	\$171,083,962	\$92,105,972	\$2,023,777,453

Spending and Economic Contributions, Resident Hunters					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	60,057	\$231,324,212	\$3,852	1,168	\$57,705,639
2	64,718	\$206,866,295	\$3,196	1,199	\$49,667,749
3	139,087	\$618,914,427	\$4,450	3,931	\$188,263,492
4	132,263	\$392,904,581	\$2,971	2,063	\$71,874,685
5	89,962	\$312,229,702	\$3,471	2,055	\$99,340,541
Statewide	486,087	\$1,765,298,095	\$3,632	11,330	\$549,814,588

Spending and Economic Contributions, Resident Hunters				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$106,436,277	\$17,505,811	\$8,185,675	\$190,047,937
2	\$91,976,620	\$13,849,669	\$8,162,962	\$185,765,680
3	\$337,792,117	\$55,511,845	\$29,559,971	\$634,006,081
4	\$136,181,514	\$29,017,573	\$10,316,735	\$261,436,537
5	\$176,506,955	\$28,903,824	\$14,792,097	\$311,786,694
Statewide	\$995,646,143	\$161,253,025	\$85,206,095	\$1,882,685,396

Spending and Economic Contributions, Nonresident Hunters					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	5,608	\$11,883,293	\$2,119	49	\$2,318,615
2	6,043	\$11,946,116	\$1,977	66	\$2,802,140
3	12,988	\$32,640,941	\$2,513	208	\$9,636,268
4	12,351	\$25,271,414	\$2,046	142	\$4,991,566
5	8,401	\$17,745,798	\$2,112	95	\$4,454,443
Statewide	45,391	\$99,768,983	\$2,198	770	\$41,375,312

Spending and Economic Contributions, Nonresident Hunters				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$4,274,177	\$940,842	\$269,497	\$7,824,468
2	\$5,168,016	\$925,876	\$429,284	\$11,213,946
3	\$17,660,121	\$3,646,342	\$1,333,438	\$34,338,433
4	\$9,297,160	\$2,201,401	\$670,985	\$17,861,341
5	\$7,568,369	\$1,711,122	\$558,827	\$13,165,411
Statewide	\$72,609,158	\$9,830,937	\$6,899,877	\$141,092,056

ANGLER TABLES

Spending and Economic Contributions, Resident and Nonresident Anglers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	326,618	\$1,040,856,456	\$3,187	4,523	\$263,002,825
2	246,636	\$956,461,808	\$3,878	5,655	\$259,617,731
3	598,279	\$1,684,454,898	\$2,815	9,556	\$518,923,227
4	168,085	\$535,368,425	\$3,185	2,425	\$95,754,550
5	389,763	\$1,266,505,739	\$3,249	6,991	\$370,047,860
Statewide	1,731,389	\$5,489,108,950	\$3,170	34,094	\$1,844,898,835

Spending and Economic Contributions, Resident and Nonresident Anglers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$423,226,686	\$81,962,175	\$44,751,348	\$759,343,904
2	\$416,459,592	\$76,486,937	\$41,761,868	\$830,633,341
3	\$820,101,447	\$153,117,755	\$83,602,294	\$1,520,318,473
4	\$165,907,993	\$37,658,646	\$20,561,621	\$312,184,517
5	\$585,715,764	\$116,848,769	\$63,799,428	\$1,010,946,165
Statewide	\$3,030,197,492	\$515,410,719	\$281,752,039	\$5,717,384,459

Spending and Economic Contributions, Resident Anglers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	305,274	\$1,015,574,482	\$3,327	4,355	\$254,876,169
2	215,120	\$916,190,892	\$4,259	5,317	\$245,557,365
3	553,051	\$1,639,829,878	\$2,965	9,135	\$500,177,055
4	151,611	\$519,291,472	\$3,425	2,316	\$91,863,478
5	363,177	\$1,223,984,660	\$3,370	6,644	\$353,801,497
Statewide	1,590,240	\$5,320,011,254	\$3,345	32,513	\$1,770,685,323

Spending and Economic Contributions, Resident Anglers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$409,660,596	\$79,315,495	\$43,464,891	\$735,468,713
2	\$393,468,135	\$72,725,376	\$39,853,506	\$783,839,163
3	\$789,522,745	\$147,265,432	\$80,701,457	\$1,464,250,785
4	\$159,024,681	\$36,199,536	\$19,837,346	\$299,631,892
5	\$559,770,215	\$111,602,104	\$61,157,953	\$966,777,050
Statewide	\$2,903,522,832	\$493,555,838	\$270,519,508	\$5,480,650,834

Spending and Economic Contributions, Nonresident Anglers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	21,345	\$25,281,974	\$1,184	168	\$8,126,656
2	31,516	\$40,270,917	\$1,278	337	\$14,060,366
3	45,228	\$44,625,020	\$987	421	\$18,746,173
4	16,474	\$16,076,953	\$976	109	\$3,891,072
5	26,586	\$42,521,079	\$1,599	347	\$16,246,363
Statewide	141,150	\$169,097,696	\$1,198	1,581	\$74,213,512

Spending and Economic Contributions, Nonresident Anglers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$13,566,090	\$2,646,680	\$1,352,454	\$23,875,191
2	\$22,991,458	\$3,761,561	\$1,922,157	\$46,794,178
3	\$30,578,702	\$5,852,323	\$2,990,537	\$56,067,689
4	\$6,883,312	\$1,459,110	\$745,605	\$12,552,625
5	\$25,945,549	\$5,246,665	\$2,681,046	\$44,169,115
Statewide	\$126,674,660	\$21,854,881	\$11,232,531	\$236,733,625

SPORT SHOOTER TABLES

Spending and Economic Contributions, Resident Sport Shooters					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	192,576	\$636,298,250	\$3,304	5,230	\$238,831,396
2	155,299	\$373,250,280	\$2,403	3,469	\$144,120,073
3	322,468	\$821,860,090	\$2,549	6,651	\$295,402,130
4	137,663	\$385,542,027	\$2,801	2,334	\$77,136,171
5	263,586	\$447,798,008	\$1,699	3,693	\$167,411,460
Statewide	1,071,592	\$2,616,397,644	\$2,442	22,278	\$1,006,628,480

Spending and Economic Contributions, Resident Sport Shooters				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$380,504,248	\$59,755,245	\$34,826,805	\$668,088,354
2	\$229,278,948	\$32,708,603	\$23,997,503	\$445,493,241
3	\$474,069,214	\$75,101,376	\$47,207,988	\$878,008,202
4	\$129,228,636	\$32,069,713	\$10,153,229	\$244,611,487
5	\$265,906,100	\$44,996,032	\$24,752,000	\$467,860,128
Statewide	\$1,647,680,563	\$267,763,713	\$156,021,695	\$3,060,126,469

WILDLIFE VIEWER TABLES

Spending and Economic Contributions, Resident and Nonresident Wildlife Viewers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	818,677	\$284,945,705	\$348	1,923	\$91,855,027
2	461,302	\$199,208,391	\$432	1,206	\$48,579,425
3	1,522,257	\$547,278,560	\$360	4,037	\$188,833,654
4	323,053	\$159,135,629	\$493	968	\$33,277,183
5	1,008,583	\$402,964,801	\$400	2,818	\$133,702,601
Statewide	4,129,971	\$1,586,737,915	\$384	11,574	\$541,990,867

Spending and Economic Contributions, Resident and Nonresident Wildlife Viewers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$153,567,631	\$21,616,012	\$14,056,511	\$269,957,501
2	\$80,472,908	\$12,291,727	\$7,934,194	\$159,758,433
3	\$315,330,240	\$46,093,404	\$31,150,980	\$575,013,078
4	\$56,512,620	\$10,446,823	\$5,222,406	\$106,525,671
5	\$219,312,465	\$32,361,536	\$20,881,949	\$387,710,037
Statewide	\$908,734,586	\$133,020,921	\$87,746,349	\$1,666,053,795

Spending and Economic Contributions, Resident Wildlife Viewers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	767,056	\$277,715,083	\$362	1,853	\$88,637,013
2	426,081	\$190,778,598	\$448	1,128	\$45,429,240
3	1,433,125	\$531,746,803	\$371	3,888	\$182,259,973
4	288,708	\$150,678,596	\$522	896	\$30,771,749
5	948,478	\$390,193,990	\$411	2,696	\$128,238,192
Statewide	3,859,547	\$1,534,861,740	\$398	11,057	\$518,778,098

Spending and Economic Contributions, Resident Wildlife Viewers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$148,459,527	\$20,910,467	\$13,561,680	\$261,012,119
2	\$75,250,581	\$11,555,003	\$7,404,223	\$149,113,165
3	\$304,193,458	\$44,340,767	\$30,092,778	\$554,155,466
4	\$52,238,721	\$9,705,635	\$4,816,606	\$98,592,635
5	\$210,643,680	\$30,986,569	\$20,049,032	\$372,524,130
Statewide	\$869,719,241	\$127,068,753	\$84,036,994	\$1,592,965,808

Spending and Economic Contributions, Nonresident Wildlife Viewers					
District	Number of Participants	Retail Spending	Spending per Participant	Jobs	Labor Income
1	51,621	\$7,230,623	\$140	70	\$3,218,014
2	35,221	\$8,429,793	\$239	78	\$3,150,185
3	89,131	\$15,531,757	\$174	150	\$6,573,681
4	34,345	\$8,457,033	\$246	72	\$2,505,434
5	60,105	\$12,770,811	\$212	122	\$5,464,409
Statewide	270,424	\$51,876,175	\$192	517	\$23,212,768

Spending and Economic Contributions, Nonresident Wildlife Viewers				
District	Value Added (GDP)	State and Local Taxes	Federal Taxes	Total Output
1	\$5,108,104	\$705,545	\$494,830	\$8,945,382
2	\$5,222,326	\$736,723	\$529,970	\$10,645,268
3	\$11,136,782	\$1,752,637	\$1,058,201	\$20,857,612
4	\$4,273,899	\$741,188	\$405,800	\$7,933,035
5	\$8,668,785	\$1,374,967	\$832,917	\$15,185,907
Statewide	\$39,015,345	\$5,952,168	\$3,709,354	\$73,087,987